CORRECTIVE ACTION PLAN FOR

ATLANTIC RICHFIELD COMPANY

ARCO Facility #1919 660 Via de la Valle Solana Beach, California SAM Case #H05166-002

October 21, 2005 SECOR Project No. 08BP.01919.07

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TABLE OF CONTENTS

1.0	INT	RODUCTION	1
2.0	SITE	BACKGROUND	2
	2.1	Site Identification	2
	2.2	Site Description And Usage	
	2.3	Geology	3
	2.4	Hydrogeology	3
	2.5	Limited Receptor Survey	4
		2.5.1 Adjacent Properties	4
		2.5.2 Other Properties	4
		2.5.3 Groundwater Production Wells	5
		2.5.4 Surface Water	5
		2.5.5 Environmentally Sensitive Receptors	5
	2.6	Previous Environmental Activities	5
3.0	ASS	ESSMENT OF IMPACTS	9
	3.1	Contaminants Of Concern	9
	3.2	Contaminant Characteristics	9
		3.2.1 Gasoline	9
		3.2.2 Benzene	9
		3.2.3 Toluene	9
		3.2.4 Ethylbenzene	.10
		3.2.5 Xylenes	.10
		3.2.6 Methyl Tert-Butyl Ether	.10
		3.2.7 Tert-Butanol	.10
		3.2.8 Tert-Amyl Methyl Ether	.10
		3.2.9 Fate, Transport and Persistence of Contaminants of Concern in the	
		Environment	.11
	3.3	Extent Of Hydrocarbon Impacts To Soil	.11
	3.4	Extent Of Hydrocarbon Impacts To Groundwater	.12
	3.5	Potential For COC Migration Due To Subsurface Utilities	
	3.6	Exposure Pathways	.13
4.0	DET	ERMINATION OF APPLICABLE CLEANUP LEVELS	.14
	4.1	Soil	.14
	4.2	Groundwater	.14
5.0	FEA	SIBILITY	.15
	5.1	Remedial Technology Screening	.15
	5.2	Remedial Alternatives	
		5.2.1 Alternative 1 – Remediation By Natural Attenuation (RNA)	.15
		5.2.2 Alternative 2 - In-Situ Air Sparging (AS) W/ Soil Vapor Extraction (SVE)	
		5.2.3 Alternative 3 - In-Situ Chemical Oxidation (ISCO)	.16
	5.3	Selected Remedial Alternative	
6.0	EST	IMATED TIME FOR GROUNDWATER CONDITIONS TO REACH CLEANUP	
		LS	.18
	6.1	Data Analysis	
	6.2	Estimated Time To Reach MCLS	

TABLE OF CONTENTS (Continued)

			ECTIVE ACTION WORK PLAN	
			CATION MONITORING AND REPORTNG PLAN	
			NOTIFICATION	
10.0 K	KEFE	KI	ENCES	24
			LIST OF FIGURES	
			Site Location Map	
•			Site Plan	
Figure	3 -		Site Detail Plan Showing Soil Sample Analytical Results and Cross-Sec Locations	ction
			Geologic Cross-Section A-A'	
			Geologic Cross-Section B-B'	
			Groundwater Elevation Contour Map, September 12, 2005	
Figure	7 -		Site Detail Plan Showing Soil Sample Analytical Results from Off-Site \ Boreholes	Well
			Site Plan with Fuel Dispenser Soil Sample Locations	
			GRO [TPH] and Benzene Concentrations in Groundwater, January 29, 1996	
Figure	9B -		GRO [TPHg], Benzene, and MTBE Concentrations in Groundwater, March 1998	23,
Figure	9C -		GRO [TPHg], Benzene, and MTBE Concentrations in Groundwater, August 2000	22,
Figure	9D -		GRO, Benzene, and MTBE Concentrations in Groundwater, September 12 and 2005	l 13,
Figure	10A	-	- Benzene and MTBE Isoconcentration Map, February 6, 2001	
Figure	10B	-	- Benzene and MTBE in Groundwater Isoconcentration Map, November 21, 20	03
			- Benzene and MTBE in Groundwater Isoconcentration Map, September 12 13, 2005	
Figure	11	-	 Benzene and MTBE Isoconcentration Map with Indicators of Natural Attenuates September 12 and 13, 2005 	tion,
Figure	12A	-	- Benzene Concentration Trend Evaluation – Well MW-16	
			- MTBE Concentration Trend Evaluation – Well MW-16	
Figure	12C	-	- MTBE Concentration Trend Evaluation – Well MW-18	

LIST OF TABLES

Table	1	- Summary of Beneficial Groundwater and Coastal Water Uses
Table	2	- Summary of Static Water Level Elevation Data
Table	3	- Summary of Soil Sample Analytical Results
Table	4A	- Summary of Groundwater Sample Analytical Results
Table	4B	- Summary of Additional Oxygenates Analytical Results
Table	5	- Summary of Baseline Natural Attenuation Data
Table	6	- Contaminant Characteristics
Table	7	- Remedial Technology Screening Matrix

TABLE OF CONTENTS (Continued)

Table 8 - Cost Estimate for Alternative 1 – Remediation by Natural Attenuation
Table 9 - Cost Estimate for Alternative 2 – Air Sparging with Soil Vapor Extraction

Table 10 - Cost Estimate for Alternative 3 - In-Situ Chemical Oxidation

Table 11 - Evaluation of Remedial Alternatives

Table 12 - Concentration Trend Analysis Summary

Note: Figures and Tables appear at the end of report.

LIST OF APPENDICES

Appendix A - Boring/Well Logs

Appendix B - Alton Geoscience Figures

1.0 INTRODUCTION

SECOR International Incorporated (SECOR), on behalf of Atlantic Richfield Company, has prepared this Corrective Action Plan (CAP) for ARCO Facility #1919 located at 660 Via de la Valle, in Solana Beach, California (Figures 1 and 2). The CAP was requested by the County of San Diego Department of Environmental Health, Site Assessment and Mitigation Program (SAM), in a letter dated July 21, 2005. The CAP provides a summary of assessment information for the site and an evaluation of, and recommendations for, remediation of hydrocarbon-impacted soil and groundwater at the site. The CAP has been prepared in general accordance with the SAM Manual (2004) and the requirements of California Code of Regulations Title 23, Division 3, Chapter 16, Article 11.

2.0 SITE BACKGROUND

2.1 SITE IDENTIFICATION

a) Site Address: ARCO Facility #1919

660 Via de la Valle

Solana Beach, California 92075

b) Current Site Use: Gasoline Service Station/Retail Store (ARCO Facility #1919)

c) Assessor's Parcel No.: 298-270-24

d) Property Owner: Sumeet Parekh & Sanjay Parekh,

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Buena Park, CA 90622

e) Responsible Party: Atlantic Richfield Company

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h) SAM Site #: #H05166-002

2.2 SITE DESCRIPTION AND USAGE

ARCO Facility #1919 is located at 660 Via de la Valle in Solana Beach, California, on the northeast corner of the intersection of Via de la Valle and Jimmy Durante Boulevard (Figure 2). The site is an active gasoline service station consisting of a single story structure containing an AM/PM market that is on an asphalt and concrete paved lot. The site fueling facilities include four USTs and six dispenser islands, each with one multi-product dispenser. The site is bordered by Valley Avenue to the west, Highland Drive to the northwest, PacLantic's Pacific View Center business complex to the north, an alley to the east, and Via de la Valle to the south. Bus parking for the Del Mar Fairgrounds and a Denny's restaurant are situated across Via de la Valle to the south. Access to the service station is by Via De La Valle from the south and Highland Drive from the northwest.

A review of the 1967 (photorevised 1975) U.S. Geological Survey (USGS) Del Mar, California, 7.5-minute quadrangle topographic map indicates that the site lies at an elevation of approximately 10 feet above mean sea level (MSL). The site is located at the north edge of the San Dieguito Valley and at the southwestern foot of a steep slope which reaches an elevation of 69 feet above MSL approximately 1,100 feet north of the site (Figure 1). The site is separated from the adjacent property to the north and east by retaining walls. The site and vicinity to the south, on the valley floor, slopes gently to the southwest toward the San Dieguito River, located approximately 2,800 feet to the south. The San Dieguito River discharges to the Pacific Ocean, located approximately 1 mile to the west of the site.

2.3 GEOLOGY

The site vicinity is underlain by Quaternary alluvium and Eocene marine sedimentary rocks. The Eocene marine sedimentary rocks in the vicinity of the site are comprised of the Rose Canyon Formation, the Torrey Sandstone, and the Delmar Formation. These units consist of siltstone and mudstone, gray shale, sandstone and conglomerates with thin beds of limestone and oyster beds (Kennedy, 1975). The site is immediately underlain by Quaternary undifferentiated alluvium and slopewash consisting of poorly to moderately consolidated deposits of clay, silt, sand, and trace gravel-sized particles derived from local bedrock sources. Based on soil boring logs from previous drilling events, the undifferentiated alluvium and slopewash materials consist primarily of poorly graded sand, and silt with occasional clayey lenses and extend to the depths of 17 feet bgs. Based on interpretation of boring logs, the Torrey Sandstone is estimated to underlie the site at depths greater than 15 feet bgs beneath the site and the general vicinity to the west and south. The hill north and east of the site, where the boring for well MW-26 was drilled, has a surface elevation of at least 13 feet higher than the other wells at the site and is underlain by Torrey Sandstone from near ground surface to at least the total well depth of 40.5 feet bgs. Torrey Sandstone under the site consists of silty sandstone and sandy siltstone. The general stratigraphy encountered during assessment drilling is included on borehole logs (Appendix A) and on Cross-Sections A-A' and B-B' referenced on Figure 3 and illustrated on Figures 4 and 5, respectively.

2.4 HYDROGEOLOGY

The site lies within the Rancho Santa Fe Hydrologic Subarea (905.11) of the Solana Beach Hydrologic Area (905.10) of the San Dieguito Hydrologic Unit (905.00). Groundwater in this hydrologic subarea has beneficial uses for municipal, agricultural, and industrial process supply but the beneficial uses do not apply to the site as stated by the California Regional Water Quality Control Board (CRWQCB) [CRWQCB, 1994] (Table 1). The site is located west of the Interstate Highway 5 and therefore is excepted from being a source of drinking water.

The San Dieguito Lagoon is located approximately one-half mile to the south of the site and flows from the east to the west (Figure 1). As shown on Table 1, the CRWQCB has designated the San Dieguito Lagoon as having beneficial uses of contact and non-contact water recreation; biological habitat of special significance; estuarine, marine, and wildlife habitat; and rare, threatened, or endangered species (CRWQCB, 1994). The San Dieguito River, which feeds into the lagoon approximately one-half mile southeast of the site, and the rivers tributary creeks that are located in this hydrologic subarea, are designated by the CRWQCB as having

beneficial uses of contact and non-contact water recreation, warm freshwater habitat and wildlife habitat; and potential uses of agricultural and industrial process supply.

As shown on Cross-Sections A-A' and B-B', groundwater is interpreted to occur within the alluvium and Torrey Sandstone (Figures 4 and 5). Most wells are screened within the alluvium only. The bottom of some well screen intervals penetrate into the Torrey Sandstone (e.g., MW-17). Well MW-26 is screened entirely within the Torrey Sandstone. Based on groundwater gauging, groundwater elevations appear to be similar in the alluvium and Torrey Sandstone, indicating high hydraulic connectivity between the geologic materials in the site area (Figures 4 and 5).

Based on quarterly monitoring events, groundwater beneath the site ranges from approximately 6 to 10 feet below ground surface (bgs) corresponding to elevations ranging from approximately 4 to 6 feet above mean sea level (MSL). Approximate groundwater flow direction is generally to the southwest. The groundwater gradient map for the third quarter 2005 event is presented as Figure 6 (SECOR, 2005).

2.5 LIMITED RECEPTOR SURVEY

SECOR conducted a limited potential sensitive receptor survey during 2004, which included governmental agency database and record inquiries and review, review of maps, and a site vicinity reconnaissance for wells and potential receptors (SECOR, 2004). SECOR personnel conducted a field reconnaissance February 10, 2004 to determine the presence or absence of potential sensitive receptors (e.g., schools and municipal or domestic production wells). A summary of the findings is presented below.

2.5.1 Adjacent Properties

The site vicinity generally consists of commercial use properties and the Del Mar Fair Grounds. The site is bordered by Valley Avenue Highland Drive to the northwest, PacLantic's Pacific View Center business complex to the north, an alley to the east, and Via de la Valle to the south. A restaurant is situated beyond Valley Avenue to the west. Bus parking for the Del Mar Fairgrounds and a Denny's restaurant are situated across Via de la Valle to the south. Interstate 5 is situated on land east of the site. Potential sensitive receptors were not reported or observed on these properties.

2.5.2 Other Properties

Four schools (St. James Catholic Community School, Santa Fe Christian Schools, St. Leos Mission and the Santa Fe Montessori School) are located within a one-mile radius. The schools are located up-gradient and greater than one-half mile from the subject site, and therefore are not likely to be impacted from the site.

2.5.3 Groundwater Production Wells

SECOR contacted the San Dieguito Water District, City of Del Mar, the California Department of Water Resources, and the manager of the Del Mar Fairgrounds/Racetrack to inquire the presence of water supply wells within a one-mile radius or at the Fairgrounds. Additionally, SECOR reviewed the following documents: Private Water List (database reviewed at offices of DEH); Banks Information Solutions Inc. Water Well Report (Appendix B); Geo TrackerTM; and the USGS Del Mar California quadrangle topographic map (USGS 1967, photo revised in 1975) and the USGS web site. Based on the database search, inquiries, and site reconnaissance there are no reported groundwater production wells exist within one-mile radius of the site. Production wells were not observed during the site reconnaissance.

2.5.4 Surface Water

The site is located approximately 2,800 feet north of the San Dieguito River. The San Dieguito River, identified by the CRWQCB as having beneficial uses defined as a "coastal surface water" (Table 1), flows westward into the San Dieguito Lagoon and then into the Pacific Ocean, approximately 1 mile west of the site. Other surface water bodies were reported or observed within one-half mile of the site. Based on the distance to the San Dieguito River it is unlikely that it will be impact by the site.

2.5.5 Environmentally Sensitive Receptors

The San Dieguito River is designated by the CRWQCB as having beneficial uses of contact and non-contact water recreation, warm freshwater habitat and wildlife habitat; and potential uses of agricultural and industrial process supply. The CRWQCB has designated the San Dieguito Lagoon as having beneficial uses of contact and non-contact water recreation; biological habitat of special significance; estuarine, marine, and wildlife habitat; and rare, threatened, or endangered species, migration of aquatic organisms (Table 1; CRWQCB, 1994). Based on the distance to the San Dieguito River and Lagoon, it is unlikely that these areas will be impacted by the site.

2.6 PREVIOUS ENVIRONMENTAL ACTIVITIES

In Fall 1990, on-site assessment began with the drilling of six hand auger borings (PL-1 through PL-6) and nine hollow-stem auger borings (B-1 through B-9), eight of which were converted to monitoring wells designated MW-1 through MW-8 (Alton, 1991). Locations of the previous hand auger borings are shown on Alton's Figure 3a presented in Appendix B, and the locations of the hollow stem auger borings/wells are shown on Figures 2 and 3. Based on analytical results, Alton estimated hydrocarbon-impacted soil extended to approximately 3 feet below groundwater in the former UST location (see Table 2 and Alton's Figures 4 in Appendix B). Petroleum hydrocarbons were reported in soil to the southwest and northeast of the former USTs and below product lines. Liquid-phase petroleum hydrocarbon (LPH) was reportedly measured in wells MW-1, MW-4, MW-5, and MW-8 (Table 3).

In February 1991, Alton performed an aquifer pump test, which included step-drawdown and slug-injection tests. Well MW-6 was used for the step drawdown aquifer test and wells MW-1

and MW-4 through MW-8 were used for the slug injection aquifer tests. Alton reported the following test results: the estimated hydraulic conductivity ranged from 4.2 X 10⁻³ to 1.2 X 10⁻² foot per minute (ft/min); the estimated transmissivity ranged from 3.8 X 10⁻² to 2.0 X 10⁻¹ foot squared per minute (ft²/min); and storage values ranged from 8 X 10⁻⁵ to 1 X 10⁻². Specific yield was reported as at least 0.1 (Alton, 1993a). The pumping rate of 3.1 gallons per minute (gpm) had an efficiency of 70%, and at 1 gpm efficiency was 93%. Alton predicted that the single-well pumping rates of 0.45 and 0.9 gpm for 2 and 4 feet of drawdown at efficiencies greater than 95% after 30 days. Alton also concluded that there was no relationship between groundwater fluctuations at the site and marine tidal pulses.

In May 1991, Alton conducted a soil vapor extraction (SVE) pilot test. The results were documented in Alton's "Subsurface Testing Report" dated March 10, 1993 (Alton, 1993a). Well MW-8 was used as an air injection well with wells MW-1, MW-2, and MW-5 as observation wells for SVE pilot testing. In addition, vapor samples were collected from wells MW-1 through MW-8 prior to air injection. Alton estimated SVE from one well at 50 scfm would produce a radius of influence of 70 feet.

December 1991 through May 1993 weekly remedial events to remove LPH using a vacuum pump truck. These activities were discontinued due to low LPH recovery (Alton, 1994b). An estimated 180 gallons of LPH were recovered from these events.

In February 1992, Alton drilled and sampled seven soil borings (B-10 through B-16) and completed them as groundwater monitoring wells, designated MW-10 through MW-16 for the purpose of further on-site and off-site assessment (Alton, 1992a). Soil sample analytical results are summarized in Table 2 and on Figure 3. Quarterly groundwater sampling commenced with the installation of these seven wells. Measured LPH thicknesses were reported to range from 0.01 to 0.96 foot in wells MW-1, MW-4, MW-5, MW-7, and MW-8 (Table 3).

In July 1992, additional site characterization was conducted with the installation of three additional monitoring wells, MW-17, MW-18, and MW-19 (later designated MW-19A; Alton, 1992d). Soil sample analytical results are shown in Table 2 and on Figures 3 and/or 7. An additional off-site monitoring well was planned to be installed on the adjacent property to the north, on PacLantic's Pacific View Centre, but Alton did not receive access authorization.

In August 1992, Alton collected four soil samples from one hand auger boring (HA-7) to investigate a reported product line leak (Alton, 1992c). Soil sample analytical results are shown in Table 2 and the location of HA-7 is shown on Alton Figure 3a in Appendix B. Gasoline-range organics carbon-chain range from C_6 through C_{12} (GRO)¹ was reported in samples from 1.8 to 8.8 feet below ground surface (bgs) ranging from 7,894 to 139,439 milligrams per kilogram (mg/kg).

In October 1993, Alton drilled and collected soil samples from borings B-20 through B-27 to further assess hydrocarbon impact prior to UST system replacement activities and to evaluate the feasibility of remediation by over-excavation (Alton, 1993b). Soil sample analytical results

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¹ The results of California Department of Health Services Modified EPA Test Method 8015 are presently reported as gasoline-range organics C₆-C₁₂ (GRO). In the majority of referenced reports this analysis was reported as total petroleum hydrocarbons as gasoline [TPH or TPHg] without consistent definition of carbon chain range included. The terms GRO, TPH, and TPHg are used interchangeably herein.

are shown in Table 2 and on Figure 3. Alton concluded that over-excavation was not a viable remediation alternative. Prior to tank replacement activities, wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, and MW-12 were properly destroyed due to the proximity of the wells to the planned fieldwork activities.

On October 15, 1993, one 8,000 gallon, two 6,000 gallon, and two 4,000 gallon USTs were removed from the site and replaced with the four currently existing 10,000 gallon USTs. Following UST system removal, soil samples designated PLA-1 through PLA-12 were collected in the vicinity of the former dispensers and analyzed for petroleum hydrocarbon constituents. Soil sample locations are shown on Alton's Figure 3a in Appendix B and the soil analytical results are summarized in Table 2.

In January 1994, during station reconstruction activities, one soil sample designated SR-1 was collected from the bottom of a trench and analyzed for petroleum hydrocarbon constituents. Soil analytical results are summarized in Table 2 and Alton's Figure 3a in Appendix B.

In early 1994, Alton installed piping for an SVE system and San Diego Gas & Electric (SDG&E) excavated a trench in Valley Avenue for electrical supply conduit to the station (Alton, 1994a). Alton collected three soil samples (TR-1, TR-2, and TR-3) from the off-site SDG&E trench.

In April 1994 Alton installed monitoring wells MW-19 (later designated MW-19B), MW-20, and MW-21 and vapor extraction wells VEW-26, VEW-27, and VEW-28 (Alton, 1994d). In June 1995, SECOR installed seven air sparge (AS) wells, SP-1 through SP-7. Soil sample locations are shown on Figures 3 and/or 7, and the soil analytical results are summarized in Table 2.

In 1995, SECOR began operation of the SVE system and brought the AS system on-line in 1999 (SECOR, 2000a). After concentrations decreased to near asymptotic levels, the AS/SVE remediation system was operated in pulse/direct ventilation mode until SECOR shut down the system on June 19, 2003, and has not been operated since. SECOR records indicate a total of 11,019 pounds of hydrocarbons were removed and destroyed during operation of the remediation system (SECOR, 2003b).

In July 2000, SECOR installed two additional monitoring wells designated MW-22 and MW-23 at the locations shown on Figure 7 (SECOR, 2000b). The purpose of these wells was to evaluate the downgradient extent of dissolved-phase petroleum hydrocarbons. Soil sample analytical results are summarized in Table 2 and on Figure 7.

In January 2003, SECOR performed oversight activities for the removal of six fuel dispensers and the associated product piping at the site (SECOR, 2003a). Six soil samples from beneath the former dispensers (D1 through D-6, Figure 8) and one from the product line trenches (PP-90°) were collected under the supervision and direction of the County of San Diego, Department of Environmental Health, Hazardous Materials Division (HMD) inspector. Additionally, four samples were collected from the soil stockpile for disposal characterization. The soil samples were analyzed for petroleum hydrocarbon constituents and analytical results are summarized on Table 2. Based on the soil sample analytical results, SECOR recommended no further assessment (SECOR, 2003a).

In October 2003, SECOR installed three additional monitoring wells designated MW-22 and MW-23 at the locations shown on Figure 7 (SECOR, 2004b). The purpose of these wells was to further evaluate the extent of downgradient, off-site dissolved-phase petroleum hydrocarbons and the presence and extent, if any, of dissolved petroleum hydrocarbons upgradient of the site. Soil sample analytical results are summarized in Table 2 and on Figure 7. SECOR also performed a limited sensitive receptor evaluation during 2004 and reported within the additional off-site assessment report. The receptor evaluation findings are summarized elsewhere herein.

Periodic groundwater monitoring and sampling began in the first quarter 1992 and has been conducted quarterly through the most recent sampling event on September 12, 2005. Historic groundwater gauging results are summarized in Table 3 and historical groundwater sample petroleum hydrocarbon and lead analytical results are summarized in Tables 4a and 4b. Groundwater elevations and the gradient have generally been consistent at the site; representative groundwater elevations and the gradient are illustrated on Figure 6 (third quarter of 2005 [September 12, 2005]). The historical distribution of dissolved GRO (TPHg), benzene and MTBE for select sampling events during 1996, 1998 and 2000, and the most recent event on September 12, 2005, are summarized in Figures 9A through 9D. Benzene and MTBE isoconcentration contours for select sampling events during 2001 and 2003 and the most recent event on September 12, 2005, are shown on Figures 10A through 10C.

On September 12th and 13th, 2005, SECOR collected additional groundwater samples during the third guarter 2005 monitoring and sampling event for analysis of baseline remediation by natural attenuation (RNA) indicator parameters (SECOR, 2005). The RNA data were used to evaluate whether or not natural attenuation of petroleum hydrocarbons is occurring at the site, at least in part as a result of biodegradation. Dissolved oxygen (DO), oxidation-reduction potential, pH, specific conductance, and temperature were measured using a downhole instrument. Groundwater samples were analyzed for nitrate (as nitrogen), sulfate, sulfide, total iron (used to calculate ferric iron concentrations), ferrous iron, methane, ammonia, and alkalinity. A summary of the baseline RNA indicator parameter analytical results and field measurements is presented in Table 5, and the distribution of select parameters is illustrated on Figure 11. GRO, BTEX, and MTBE analytical results from the third guarter 2005 groundwater sampling event are also included in Table 5 and on Figure 11 for comparison. As shown in Table 5 and/or on Figure 11, areas at the site with relatively higher petroleum hydrocarbon concentrations (or in close proximity and downgradient of these areas) generally coincide with areas with higher ferrous iron, sulfide, and methane concentrations, lower oxidation-reduction potentials, and lower DO and nitrate concentrations. This suggests that biodegradation of dissolved petroleum hydrocarbons at the site is occurring via aerobic respiration, denitrification, sulfate reduction, ferric-iron reduction, and methanogenesis.

3.0 ASSESSMENT OF IMPACTS

The purpose of this section is to (1) identify the contaminants of concern (COCs) present at the site; (2) discuss the chemical, physical, toxicological and environmental fate/transport characteristics of the COCs; and (3) describe the extent of COC impact to soil, groundwater, surface water, air and subsurface utilities at and near the site.

3.1 CONTAMINANTS OF CONCERN

Available information regarding past and present UST operations at the site indicates that the USTs were, and currently are, used for storing gasoline. Accordingly, laboratory analytical test methods during the site assessment activities addressed gasoline-related hydrocarbons and additives. Diesel has reportedly not been stored or sold at the site. Laboratory analysis of soil and groundwater samples during assessment identified gasoline as the principal COC at the site. Gasoline-related COCs that have been identified in soil and/or groundwater include GRO (TPHg), benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), tert-butyl alcohol (TBA), and several detected analytical results for tert-amyl methyl ether (TAME).

3.2 CONTAMINANT CHARACTERISTICS

Key chemical, physical, environmental fate/transport characteristics and relevant regulatory levels of the COCs are summarized in Table 6. Additional information on the COCs is summarized below.

3.2.1 Gasoline

Gasoline is a clear liquid with a characteristic odor that is used as a fuel for internal combustion engines and is a solvent. Gasoline is a flammable liquid and has a low solubility in water. Gasoline vapors are also flammable and may flash if an ignition source is present. Gasoline contains chemicals which are hazardous to human health and may cause cancer (NJDHSS). The primary COCs in gasoline that have been reported in samples from the site are discussed individually in the following paragraphs.

3.2.2 Benzene

Benzene is a colorless liquid with an aromatic odor. It is found in gasoline, is used in making other chemicals and is used as a solvent. Commercial use of benzene as a solvent is generally being phased out due to its toxicity. Benzene is flammable in liquid and vapor states and vapors may flash if an ignition source is present. Benzene is a carcinogen and mutagen which is readily absorbed through inhalation, ingestion and dermal pathways (NJDHSS).

3.2.3 Toluene

Toluene is a colorless liquid with a sweet, strong odor. It is present in gasoline and used in making other chemicals, perfumes, dyes and detergents. Toluene is flammable in liquid and

vapor states and vapors may flash if an ignition source is present. Toluene exposure may damage a developing fetus (NJDHSS).

3.2.4 Ethylbenzene

Ethylbenzene is a colorless liquid with an aromatic odor that is found in gasoline, used in the production of polymers and is used as a solvent. Ethylbenzene is flammable in liquid and vapor states, and vapors may flash if an ignition source is present. Long term exposure to ethylbenzene may cause damage to the liver. The State of California considers ethylbenzene to be a carcinogen.

3.2.5 Xylenes

Xylene isomers (meta-xylene, ortho-xylene and para-xylene) are clear liquids with strong odors. Xylenes are found in gasoline and used as solvents. Xylenes are flammable in liquid and vapor states, and vapors may flash if an ignition source is present. Long term exposure to xylenes may damage the liver and kidneys, and xylenes may damage a developing fetus (NJDHSS).

3.2.6 Methyl Tert-Butyl Ether

Methyl tert-butyl ether (MTBE) is a colorless liquid that has historically been used in gasoline as an octane booster and to reduce hazardous emissions from automobiles. MTBE is flammable in liquid and vapor states, and vapors may flash if an ignition source is present. Long-term exposure to MTBE may cause damage to the kidneys and is an animal carcinogen (Lyondell, 2003). The general use of MTBE in gasoline in the State of California was phased-out in 2003. The State of California considers MTBE a suspected human carcinogen based on carcinogenic effects observed in experimental animals (CalEPA, 1999).

3.2.7 Tert-Butanol

Tert-butanol (TBA) is an oily, colorless liquid or solid with a mothball-like odor. TBA is used as a solvent for pharmaceuticals, as a paint remover and as an additive in unleaded gasoline. TBA is flammable as a solid or liquid and poisonous gases may be produced in a fire. TBA is not listed as a carcinogen or known to adversely affect reproduction; however high levels of exposure to TBA may affect kidney and liver function and be a respiratory and dermal irritant (NJDHSS).

3.2.8 Tert-Amyl Methyl Ether

Tert-amyl methyl ether (TAME) is a colorless liquid that was historically used in gasoline as an octane booster and to reduce hazardous emissions from automobiles. TAME is flammable in liquid and vapor states, and vapors may flash if an ignition source is present. Adverse reproductive effects have been reported in animals. Chronic exposure will cause neurological degradation and/or abnormalities (Acros Organics N.V., 2002).

3.2.9 Fate, Transport and Persistence of Contaminants of Concern in the Environment

Chemical fate and transport in the environment is dependent on a variety of factors relating to the physical and chemical properties of the substance(s) released and the subsurface conditions at the release site. A full fate and transport analysis was beyond the scope of this document; however, a general discussion of fate and transport of the contaminants of concern is provided below. As discussed in the previous sections, benzene and MTBE are classified by the State of California as carcinogens and therefore represent the greatest potential risk to human health and the environment. Therefore, discussion of fate and transport and persistence in the environment will focus on these two compounds. Toluene, ethylbenzene, and xylene isomers are anticipated to behave similarly to benzene, while TBA and TAME are anticipated to behave more like MTBE.

A comparison of chemical properties of benzene and MTBE (Table 6) shows that MTBE is approximately 24 times more soluble in water than benzene and has a lower soil sorption coefficient (Koc). Therefore, when released into the environment MTBE is more likely to reach groundwater, and when groundwater is reached it is more readily transported with groundwater flow.

Biodegradation and chemical oxidation commonly occur in the subsurface and may act to reduce COC concentrations over time. Biodegradation occurs when microorganisms in the subsurface consume a chemical under aerobic or anaerobic conditions. The extent of biodegradation that occurs is dependent on the types of microorganisms that are present, site-specific environmental conditions, and the presence of sufficient nutrients to support the microorganisms. Benzene is reported to be readily biodegradable under aerobic conditions in surface water with a half-life ranging from as little as two days to 17 days; however, aerobic degradation is expected to occur more slowly in groundwater. Benzene biodegradation does not occur as readily under anaerobic conditions.

MTBE is not a naturally occurring substance. As a result, MTBE biodegradation rates are typically low compared to refined petroleum products. Studies have shown that MTBE can biodegrade at low to moderate rates resulting in residual TBA, which in turn is easily mineralized to CO₂ and H₂O. Once benzene has been removed, degradation rates for MTBE typically increase (Wilson et al, 2000). Other studies have shown that MTBE-degrading aerobic microbes are relatively uncommon in the subsurface at most sites and that addition of special cultures and nutrients may be necessary to encourage aerobic degradation of MTBE (Spinnler et al, 2001).

3.3 EXTENT OF HYDROCARBON IMPACTS TO SOIL

Based on historical soil assessment data, the area residual soil hydrocarbon impact, characterized by GRO (TPHg) concentrations greater than 100 mg/kg reported in analyzed soil samples, is located on the western half of the property and partially encroaches on the adjacent right-of-ways in a westerly direction. The estimated lateral extent of historical petroleum hydrocarbon-impacted soil is shown on Figure 3. Soil sampling locations and analytical results are summarized in Table 2 and on Figures 3 and 7.

As shown on Cross-Sections A-A' and B-B' (Figures 4 and 5), the estimated vertical extent of historical soil impact is between 7 and 12 feet bgs in the area of the water table. Using the above lateral and vertical limits, the estimated volume of soil historically containing petroleum hydrocarbons, in concentrations greater than 100 mg/kg GRO (TPHg), is approximately 2,300 cubic yards. However, this estimate is based on analytical data collected prior to operation of the AS/SVE system and may not represent the existing geometry of residual soil hydrocarbon impact, which is more likely to be smaller in volume.

3.4 EXTENT OF HYDROCARBON IMPACTS TO GROUNDWATER

Historically, dissolved hydrocarbons have been reported in groundwater samples collected from 24 of the 26 wells. The greatest reported GRO, benzene, and MTBE concentrations prior to remediation activities were 120,000 μ g/L (MW-15 on September 2, 1993), 15,000 μ g/L (MW-17 on March 23, 1998 and MW-19B on September 28, 1994), and 210,000 μ g/L (MW-15; March 20, 1997), respectively (Table 4A). Since the second quarter of 2004 (several quarters following remedial system shut-down), 11 of the remaining 17 wells (9 destroyed in 1993 due to upgrade activities) have not had GRO or benzene detected above laboratory reporting limits. Additionally, GRO and benzene have not been reported above laboratory reporting limits in downgradient wells MW-19A, MW-22, MW-24, or MW-25. Since the second quarter of 2004, MTBE has not been detected above reporting limits in eight of the remaining 17 wells.

Based on groundwater sample analytical results collected to date, the limits of the dissolved benzene and MTBE plumes are effectively defined within practical limits. Benzene and MTBE concentrations have generally decreased over time in the wells with historical reported concentrations. GRO and Benzene concentrations have not been detected in the most downgradient wells (MW-19A, MW-22, MW-24, and MW-25); therefore, it does not appear that the dissolved GRO and benzene plumes are migrating. MTBE concentrations have been detected in some of the same downgradient wells; however, MTBE concentrations in downgradient wells have generally decreased over time.

Historic groundwater gauging results are summarized in Table 3 and historical groundwater sample petroleum hydrocarbon analytical results are summarized in Tables 4a and 4b. Groundwater elevations and the gradient have generally been consistent at the site; representative groundwater elevations and the gradient are illustrated on Figure 6 (third quarter of 2005 [September 12, 2005]). The historical distribution of dissolved GRO (TPHg), benzene and MTBE for select sampling events during 1996, 1998 and 2000, and the most recent event on September 12, 2005, are summarized in Figures 9A through 9D. Benzene and MTBE isoconcentration contours for select sampling events during 2001 and 2003 and the most recent event on September 12, 2005, are shown on Figures 10A through 10C.

3.5 POTENTIAL FOR COC MIGRATION DUE TO SUBSURFACE UTILITIES

Man-made pathways for potential COC migration are located on site and in the site vicinity. The pathways are subsurface utilities that may include cable, electricity, gas, phone, sewer, storm drain, and water conduits. The depth of utilities in general are buried in trenches at depths ranging from 1.5 to 8 feet bgs. Because depth to water beneath the site and vicinity ranges between approximately 6 and 10 feet bgs, the subsurface utilities may act as migration pathways for hydrocarbons in groundwater.

3.6 EXPOSURE PATHWAYS

Based on existing site conditions, the only potentially complete exposure pathways for the subject site are (1) ingestion of impacted groundwater; (2) vapor inhalation due to COC volatilization from impacted soil or groundwater below the site and adjacent sites; (3) impact to environmental receptors; (4) ingestion of impacted soil and dust; and (5) dermal contact with impacted soils. These potential exposure pathways are evaluated below.

Due to saltwater intrusion into the shallow groundwater aquifer from the Pacific Ocean to the west of the site, groundwater in the site vicinity and generally to the west of Interstate 5 is not currently used for municipal supply. Also, as noted in the Limited Receptor Survey in Section 2.5 above, no public wells were identified within one mile of the site. Therefore, this exposure pathway is incomplete.

The presence of hydrocarbons, particularly benzene and MTBE, in soil and groundwater beneath the site represents a potential complete vapor inhalation exposure pathway. In this pathway the COCs would volatilize from impacted soil and groundwater. The resulting hydrocarbon vapors would then migrate vertically through the subsurface soil and asphalt or concrete surface into the breathing zone at the site. Known areas of soil and groundwater impact below the site are located approximately 30 to 40 feet away from enclosed structures at the site. The known areas of soil and groundwater impact off-site are concentrated below the intersection of Via de la Valle and Jimmy Durante Boulevard and are not located beneath enclosed structures. As a result hydrocarbon vapors that migrate to the surface would tend to become diluted with outdoor air and dispersed by winds. Therefore, due to the existing on and off-site conditions and site use, the level of risk posed by the vapor inhalation exposure route is low. If site use was to change and enclosed structures were to be placed over the hydrocarbon-impacted areas, then the level of risk due to this exposure pathway may increase.

The San Dieguito River and San Dieguito Lagoon, located approximately one-half mile south of the site, are the nearest downgradient surface water receptors. Groundwater samples collected from the furthest downgradient well (MW-22; approximately 345 feet south the site) during the second and third quarterly monitoring periods of 2005 have revealed that MTBE impact is present at levels near or below the California primary maximum contaminant level of 13 μ g/L. MTBE concentrations have generally been decreasing over time downgradient of the site, therefore, this pathway is incomplete.

During normal site operations, exposure to impacted soil and/or dust is unlikely to occur because the site is predominantly covered with asphalt and concrete. The potential exists if future work is performed that involves the disturbance of subsurface soil at the site or in the site vicinity. The potential for contaminant exposure during activities can be minimized through worker safety training, dust control, and the use of personal protective equipment.

4.0 DETERMINATION OF APPLICABLE CLEANUP LEVELS

SECOR proposes soil and groundwater cleanup goals that are protective of human health and the environment.

4.1 SOIL

SECOR proposes soil cleanup goals that are protective of current and future beneficial groundwater uses and human health and safety. Specific numeric cleanup goals have not been developed for this site.

4.2 GROUNDWATER

To protect current and potential future beneficial uses of groundwater and surface water in the vicinity, long-term cleanup levels that are protective of human health and the environment will be applied. These long-term groundwater cleanup goals are presented in the table below:

Applicable Groundwater Cleanup Levels – Potential Future Use as Municipal Drinking Water Suppl			
Chemical	Target Concentration (µg/L)		
Benzene	1 – California primary maximum contaminant level (MCL)		
Toluene	150 - California primary MCL		
Ethylbenzene	300 - California primary MCL		
Xylenes	1,750 - California primary MCL		
MTBE	13 – California primary MCL		
TBA	12 – California State action level		

5.0 FEASIBILITY STUDY

The purpose of this section is to evaluate alternative site remediation strategies for appropriateness and cost-effectiveness. Based on the evaluation, the most appropriate and most cost-effective strategy will be selected for implementation at the site. The main focus is the long-term protection of current and future beneficial groundwater uses in the area, with MTBE being the primary COC. The remedial strategy to be implemented will be chosen based on the following objectives (listed in order of importance):

- 1. Stop migration of the dissolved-phase hydrocarbon groundwater plume.
- 2. Reduce the concentration of dissolved-phase hydrocarbons in groundwater to levels that are protective of current and future beneficial uses.
- 3. Reduce the source mass of hydrocarbons in vadose zone and capillary-fringe soil.

5.1 REMEDIAL TECHNOLOGY SCREENING

A list of proven remedial technologies was screened for applicability at the site. A remedial technology screening matrix is presented as Table 7. Site-specific conditions that involve impact to soil and groundwater were considered for the initial screening of corrective action technologies. Technologies that passed the initial screening are listed below:

- Pump-and-Treat
- Excavation and Off-Site Disposal
- Soil Vapor Extraction (SVE)
- Dual-Phase Extraction (DPE)
- Air Sparging (AS) w/ SVE
- In-Situ Enhanced Bioremediation
- Bioventing
- Biosparging
- In-Situ Chemical Oxidation (ISCO)
- Remediation by Natural Attenuation (RNA)

5.2 REMEDIAL ALTERNATIVES

The remedial technologies that passed the initial screening were used to develop three remedial alternatives that, in SECOR's opinion, can best achieve the remedial goals. These alternatives are described below.

5.2.1 Alternative 1 – Remediation by Natural Attenuation (RNA)

RNA is a passive remedial method that involves no active remediation. RNA is a multi-component process that incorporates biological mechanisms (biodegradation), chemical mechanisms (oxidation and hydrolysis), and physical mechanisms (dispersion, volatilization, and sorption). Groundwater monitoring data (Table 4A) show that dissolved benzene and MTBE concentrations have continued to decrease. This suggests that the remaining dissolved hydrocarbon concentrations in groundwater are currently being reduced through the processes

of natural attenuation. Additionally, on September 12 and 13, 2005, SECOR collected and submitted groundwater samples for evaluation of baseline RNA indicator parameters. An evaluation of this data (Section 2.6) suggested that RNA is occurring in groundwater below the site. RNA involves no further active remediation, and no further monitoring of groundwater. This remediation method is the most cost-effective of the three proposed alternatives at \$0 (Table 8).

5.2.2 Alternative 2 - In-Situ Air Sparging (AS) w/ Soil Vapor Extraction (SVE)

This alternative would use AS and SVE to remediate the saturated and unsaturated soil zone. The SVE system would consist of a 10-horsepower vacuum blower connected to approximately six on-site wells and six off-site wells. The AS system would consist of a 10-horsepower rotary screw air compressor connected to approximately six on-site and six off-site air sparging wells. The SVE and AS wells would be connected to the on-site treatment equipment compound by below-grade piping. The extracted soil vapor would be treated using a catalytic oxidation system. Treated soil vapor would be discharged under permit to the atmosphere. In later stages of the project, the oxidation system could be replaced by activated carbon adsorbers. This system would also promote biostimulation by increasing the dissolved oxygen in the groundwater.

The AS and SVE equipment, and a portion of the necessary below grade piping for this alternative are already in place as on-site AS/SVE was performed at the site from 1995 to 2003. The main capital cost necessary for this alternative is the installation of six off-site AS/SVE wells, six additional on-site AS/SVE wells, and connecting below grade piping. It is expected that approximately 24 months of AS/SVE system operation would be required to lower dissolved hydrocarbons to asymptotic concentrations at which time the system could be shut down. The final goal, achieving groundwater MCLs, would be completed by RNA. The time required for this last step would be estimated after the shutdown of the AS/SVE system. The estimated cost for this alternative is approximately \$338,695 (Table 9).

5.2.3 Alternative 3 - In-Situ Chemical Oxidation (ISCO)

In this alternative a network of twelve sparge wells is installed across the plume area (approximately six on-site and six off-site within the intersection). An ozone generator system is connected to the wells by below grade piping and used to inject a mixture of air and ozone or oxygen and ozone into the sparging wells. The injected ozone directly oxidizes dissolved hydrocarbons in the groundwater, converting them to carbon dioxide and water. The injected ozone also increases dissolved oxygen levels in groundwater which promotes in-situ bioremediation of the hydrocarbons. The ozone sparging would be conducted at low flow rates (less than 4 cubic feet per minute) in a pulsed fashion. Based on results of previous SVE at the site, low flow ozone sparging is not expected to generate significant off-gassing of volatilized hydrocarbons. Therefore, no off site SVE system is proposed.

It is expected that approximately 12 months of ozone system operation would be required to lower dissolved hydrocarbons to asymptotic concentrations at which time the system could be shut down. The final goal, achieving groundwater MCLs, would be completed by RNA. The time required for this last step would be estimated after the shutdown of the ozone system. The estimated cost for this alternative is approximately \$270,302 (Table 10).

5.3 SELECTED REMEDIAL ALTERNATIVE

A comparison of the advantages and disadvantages of the proposed alternatives is provided in Table 11. After comparing the three alternatives it appears that all of the proposed alternatives would result in an adequate level of protection of human health, and protect the environment and beneficial uses of groundwater and surface water in the vicinity of the site. Each alternative would effectively reduce the remaining hydrocarbons in the subsurface over time, and each alternative is easy to implement. Most other factors in the matrix are also nearly equal in terms of short and long-term effectiveness of remediation, and impact to the surrounding community.

Given that all three of the proposed alternatives would be effective in reaching the cleanup goals, the selection process is narrowed down to a cost comparison (Table 11). Based on cost considerations, RNA is the preferred remedial alternative for the remaining hydrocarbon impact at the site.

6.0 ESTIMATED TIME FOR GROUNDWATER CONDITIONS TO REACH CLEANUP GOALS

This section provides an estimate of the time required for dissolved hydrocarbon concentrations in groundwater below the site to reach State of California primary drinking water MCLs by the processes of natural attenuation. Baseline RNA parameter testing results from the third quarter 2005 (September 2005) groundwater monitoring and sampling event indicate biodegradation is occurring at the site (see Section 2.6). In addition, periodic quarterly sampling analytical results indicate that the dissolved hydrocarbon plume below the site is shrinking and not migrating (Section 3.0). GRO and benzene concentrations have not been detected in the most downgradient wells (MW-19A, MW-22, MW-24, and MW-25); therefore, it does not appear that the dissolved GRO and benzene plumes are migrating. MTBE concentrations have been detected in some of the same downgradient wells; however, MTBE concentrations in downgradient wells have generally decreased over time.

As reported in the third quarter 2005 monitoring report for the site (samples collected on September 12th and 13th, 2005) there are currently 11 monitoring wells at the site (MW-6, MW-15 through MW-18, MW-19B, MW-21, MW-22, MW-24, and MW-25) that either historically or consistently contain dissolved benzene and/or MTBE above the State of California primary MCLs of 1.0 µg/L and 13 µg/L, respectively. Hydrocarbon concentrations in the other eight monitoring wells (MW-10, MW-11, MW-13, MW-14, MW-19A, MW-20, MW-23, and MW-26) have been near or below the MCLs for at least one year (or since the well was installed, in the case of MW-11, MW-14, MW-23, and MW-26). The most recent dissolved benzene and MTBE analytical results are summarized in Table 4A and on Figure 10C (note that some wells were not sampled during September 2005 due to the well sampling reduction program).

6.1 DATA ANALYSIS

It has been observed at fuel hydrocarbon sites that the attenuation of dissolved hydrocarbon concentrations generally follows a first-order decay trend once the majority of hydrocarbon source material has been removed. The following equation has been used to describe the observed concentration decrease at a point (e.g. monitoring well) within a dissolved hydrocarbon plume:

 $C = C_0 e^{-kt}$

Where: $C = concentration at time t (\mu g/L)$

 C_0 = peak concentration (µg/L)

k = overall attenuation rate constant (days⁻¹)

t = elapsed time after observation of peak concentration (days)

To estimate the time required for remaining dissolved-phase petroleum hydrocarbons beneath the site to attenuate to MCLs through RNA, SECOR used concentration trends of representative dissolved hydrocarbon compounds (benzene and MTBE) in key wells at the site to estimate site-specific first-order attenuation rate constants. The resulting rate constants were then used to extrapolate the estimated time required for remaining dissolved-phase hydrocarbons at the site to reach MCLs through RNA.

Based on their locations (cross and downgradient) and historical petroleum hydrocarbon concentration trends, wells MW-16 and MW-18 were selected to be representative key wells for estimating the attenuation rate constants for benzene and MTBE. The estimated attenuation rate constants were then applied to the wells with the highest recent benzene and MTBE concentrations to extrapolate the time required for these compounds to reach MCLs. Based on data for the past year, the two wells with the highest reported benzene concentrations are wells MW-15 (1,700 μ g/L on September 13, 2005) and MW-21 (490 μ g/L on March 8, 2005), located down and cross-gradient of the USTs, respectively. The two wells with the highest reported MTBE concentrations are wells MW-15 (16,000 μ g/L on September 13, 2005) and MW-18 (4,300 μ g/L on September 12, 2005). It is also noteworthy, that although well MW-16 has not been sampled in over one year, due to the well sampling reduction program and access restrictions, the most recent reported MTBE concentration in this well was 5,900 μ g/L (February 25, 2004).

The benzene data set used for analysis from MW-16 ranges from the maximum reported concentration of 5,900 μ g/L on September 28, 1994 to the most recent concentration detected above laboratory reporting limits of 26 μ g/L on May 10, 2000. Dissolved benzene was not detected above reporting limits in samples collected from well MW-16 after May 2000. A semi-log plot of benzene concentration versus time for well MW-16 is presented as Figure 12A. A least-squares statistical method was used to calculate the best-fit line through the data set. The best-fit line and equation are included on Figure 12A. The slope of the best-fit line (0.0039 days⁻¹) is the estimated first-order attenuation rate constant for the data set. The first order decay equation and estimated rate constant was then used to extrapolate the time required for benzene concentrations to reach 1.0 μ g/L. Using the estimated attenuation rate constant in well MW-16, benzene concentrations in the vicinity of wells MW-15 and MW-21 will reach 1 μ g/L in approximately 5.12 and 3.73 years, respectively. A summary of the benzene concentration trend analysis for well MW-16, and extrapolation for wells MW-15 and MW-21 is provided in Table 12.

The MTBE data set used for analysis from MW-16 ranges from the maximum reported concentration (45,000 μ g/L on March 20, 1997) to the most recent result (5,900 μ g/L on February 25, 2004). A semi-log plot of MTBE concentration versus time for well MW-16 is presented as Figure 12B, which includes the least-squares statistical method best-fit line and equation. The slope of the best-fit line (0.001 days⁻¹) is the estimated first-order attenuation rate constant for the data set. The first order decay equation and estimated rate constant was then used to extrapolate the time required for MTBE concentrations to reach 13.0 μ g/L. Using the estimated attenuation rate constant in well MW-16, MTBE concentrations in the vicinity of wells MW-15 and MW-16 will reach 13.0 μ g/L in approximately 19.39 and 13.73 years, respectively (Table 12).

The MTBE data set used for analysis from MW-18 ranges from the maximum reported concentration (11,000 μ g/L on May 10, 2000) to the most recent result (4,300 μ g/L on September 12, 2005). A semi-log plot of MTBE concentration versus time for well MW-16 is presented as Figure 12C, which includes the least-squares statistical method best-fit line and equation. The slope of the best-fit line (0.0006 days⁻¹) is the estimated first-order attenuation rate constant for the data set. The first order decay equation and estimated rate constant was then used to extrapolate the time required for MTBE concentrations to reach 13.0 μ g/L. Using

the estimated attenuation rate constant in well MW-18, MTBE concentrations in the vicinity of wells MW-15 and MW-18 will reach 13.0 μ g/L in approximately 32.39 and 25.33 years, respectively (Table 12).

6.2 ESTIMATED TIME TO REACH MCLS

Based on a review of the site data and experience at similar sites, it is estimated that groundwater concentrations below the site will reach MCLs in approximately 50 years. This estimate allows for a reasonable amount of uncertainty due to the possible presence of small pockets of residual hydrocarbons below the site that could result in future short-term concentration spikes. Also, this estimate does not account for the possibility of a future release at the site.

7.0 CORRECTIVE ACTION WORK PLAN

Based on the selection of Remedial Alternative 1 (RNA), no further active remediation would be required. A permit application for well destruction will be prepared following concurrence from SAM with this CAP and completion of the required 30-day public notification period.

8.0 VERIFICATION MONITORING AND REPORTING PLAN

Further monitoring and reporting are considered unnecessary at the site because RNA has been demonstrated by the existing monitoring program. It is SECOR's professional opinion that sufficient monitoring of the groundwater quality at the site has already occurred.

9.0 PUBLIC NOTIFICATION

A public notification program will be implemented as part of the Corrective Action Plan approval process. This program will include distribution of Public Notices to adjacent local businesses, residences and the local planning agency. The public notice will describe the proposed CAP and invite interested parties to review the CAP at a local library and/or the offices of the SAM. There will be a 30-day period for the public to review the CAP and to comment directly to the SAM.

10.0 REFERENCES

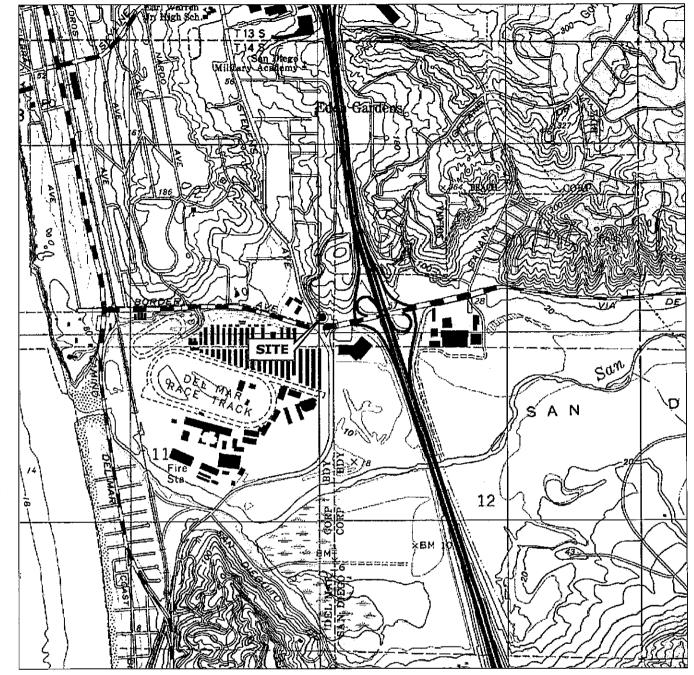
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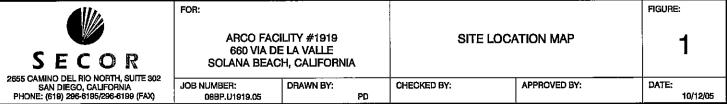
FIGURES CORRECTIVE ACTION PLAN

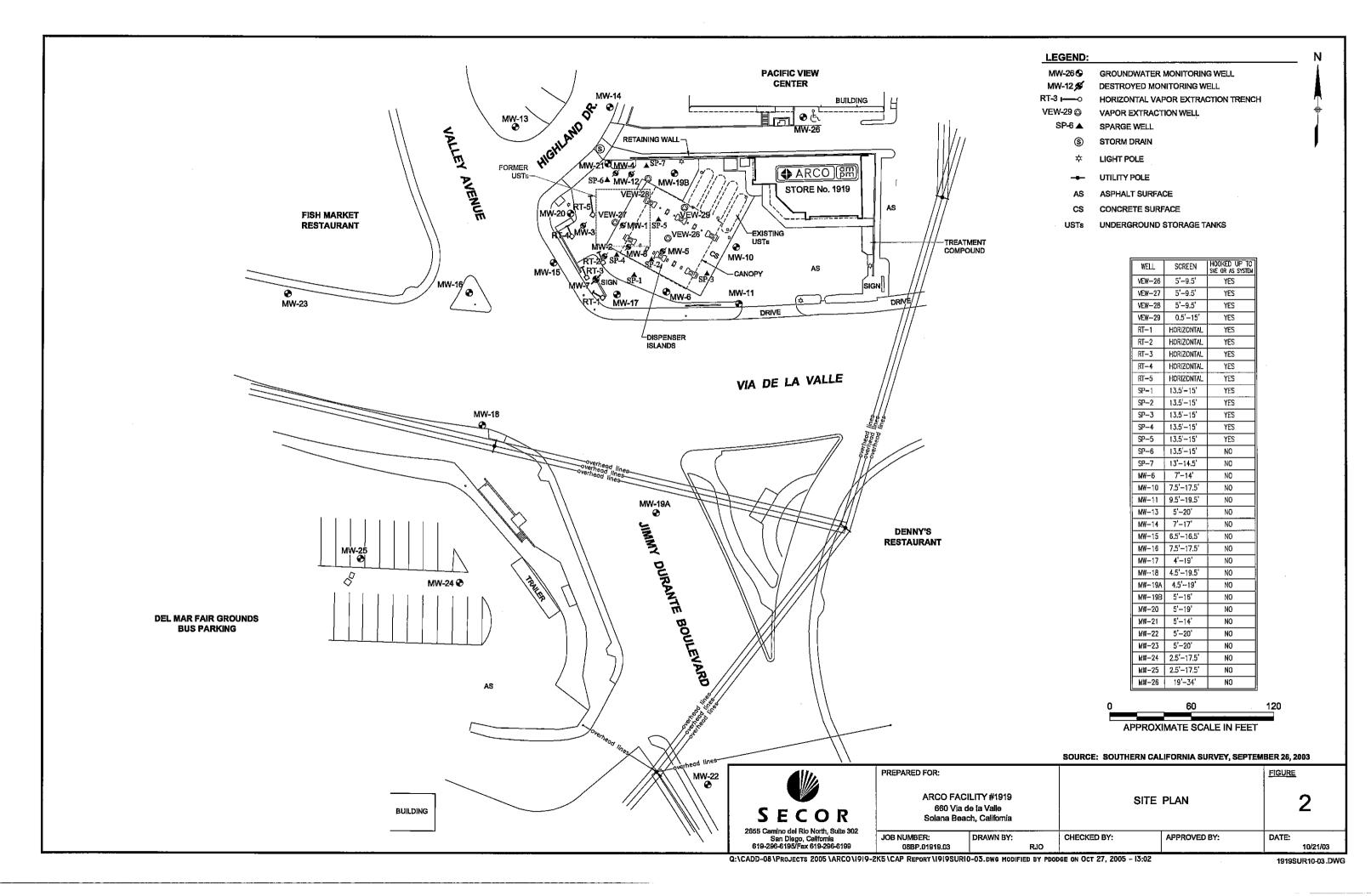
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ARCO Facility #1919
660 Via de la Valle
Solana Beach, California
SAM Case #H05166-002
SECOR PROJECT NO. 08BP.01919.07
October 21, 2005

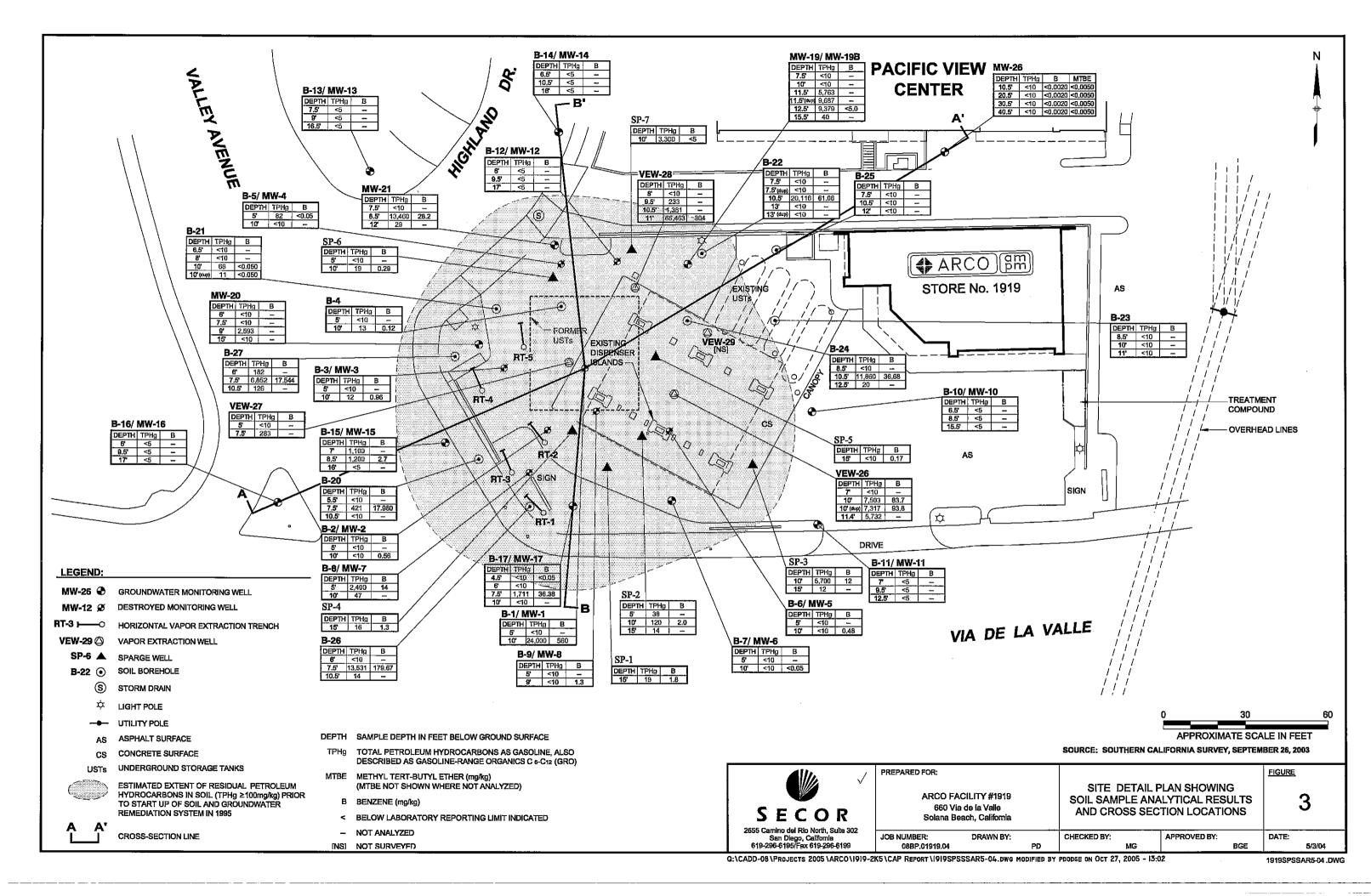


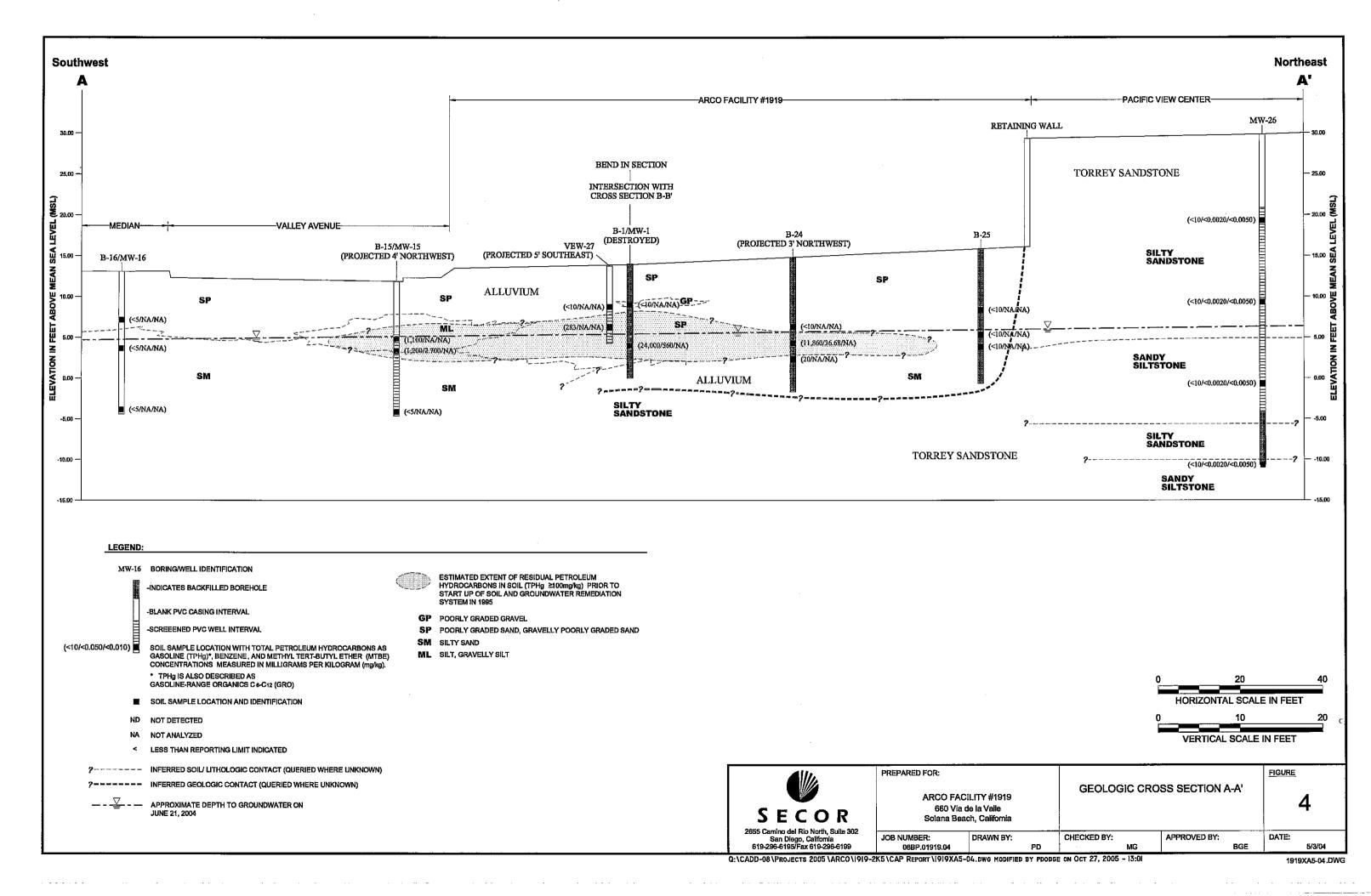
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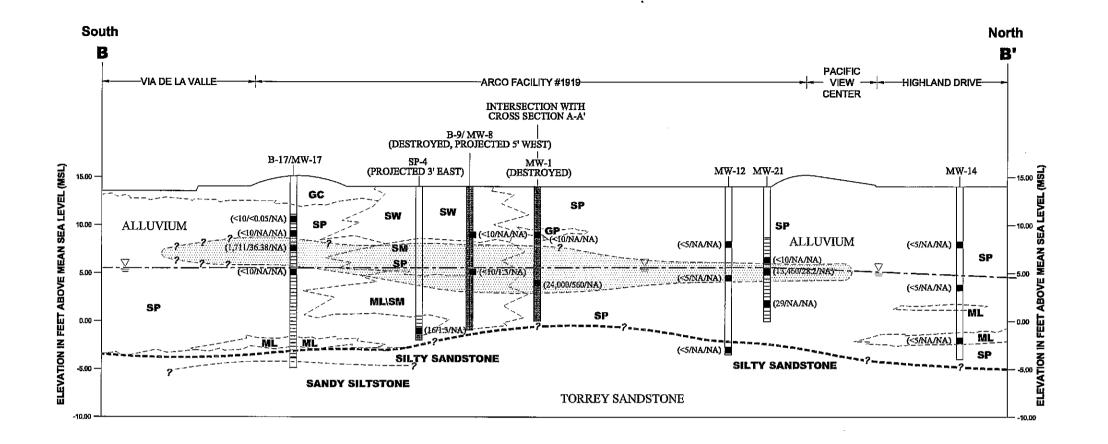


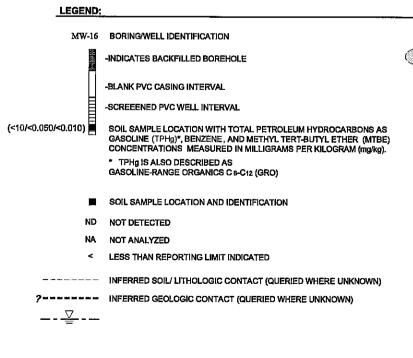














ESTIMATED EXTENT OF RESIDUAL PETROLEUM HYDROCARBONS IN SOIL (TPHg ≥100mg/kg) PRIOR TO START UP OF SOIL AND GROUNDWATER REMEDIATION

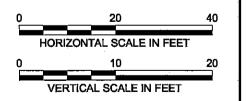
GP POORLY GRADED GRAVEL

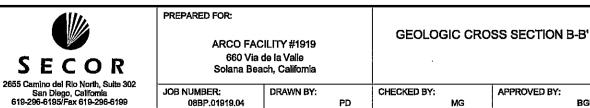
SP POORLY GRADED SAND, GRAVELLY POORLY GRADED SAND

SM SILTY SAND

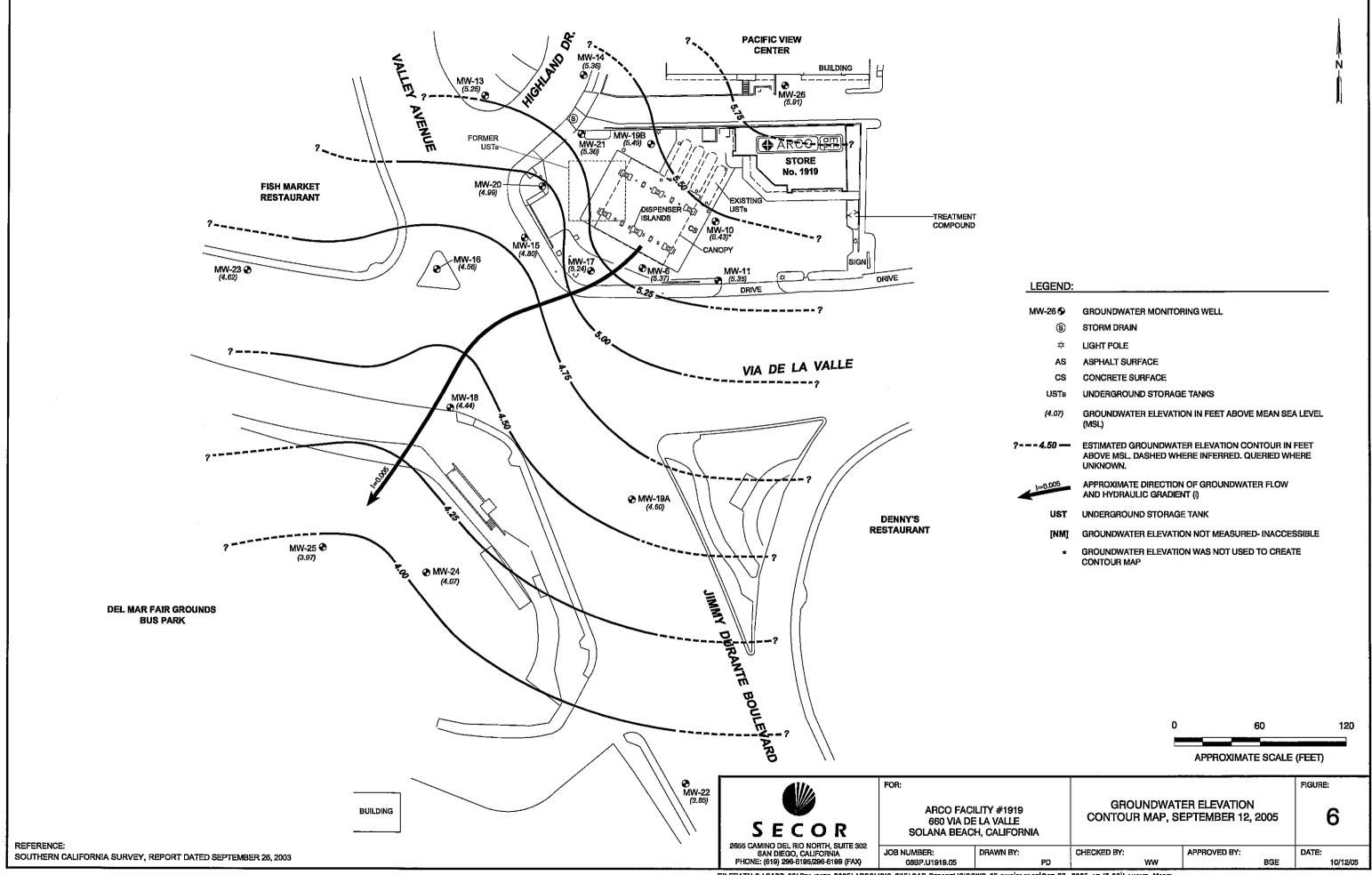
GC CLAYEY GRAVEL

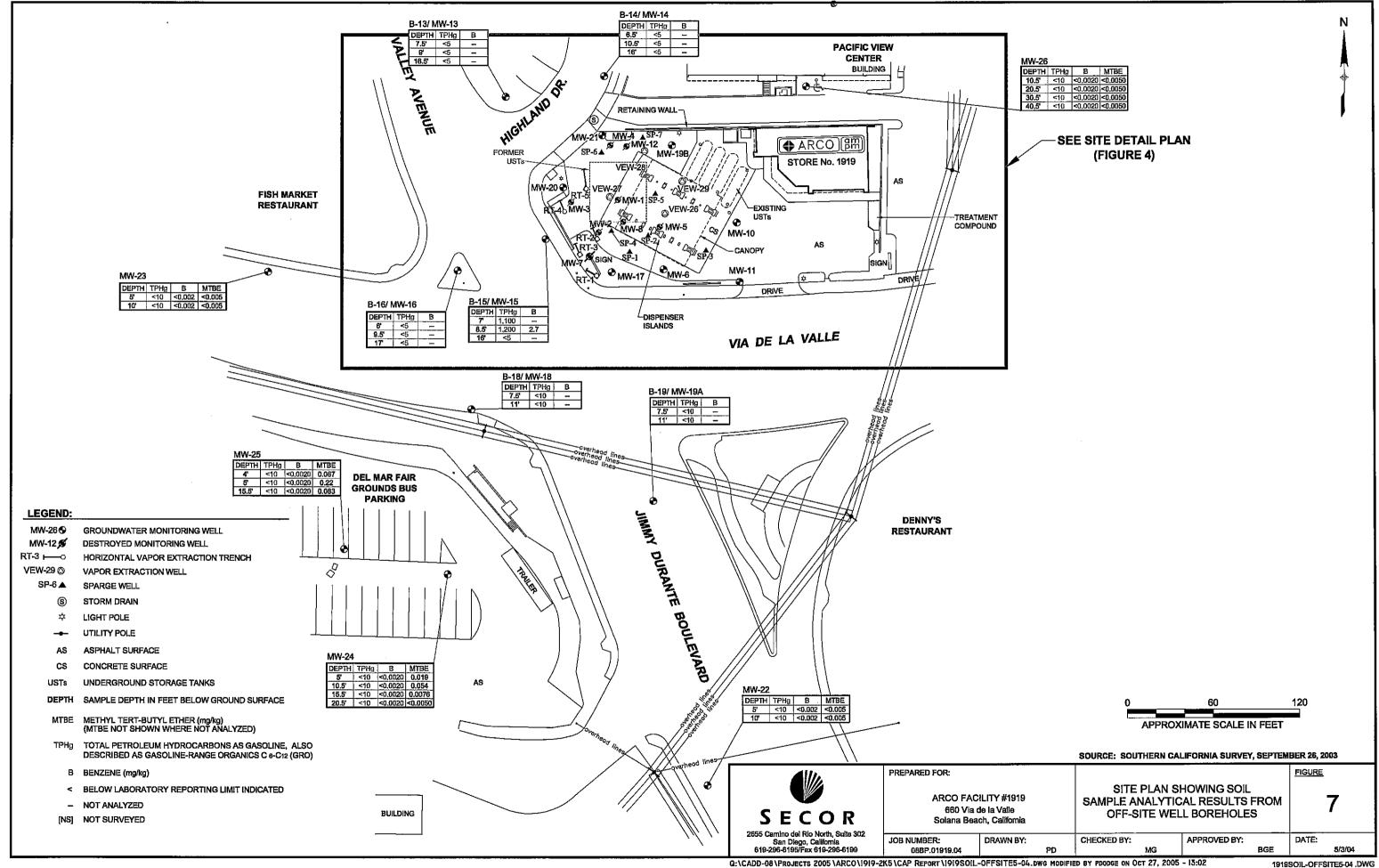
MIL SILT, GRAVELLY SILT

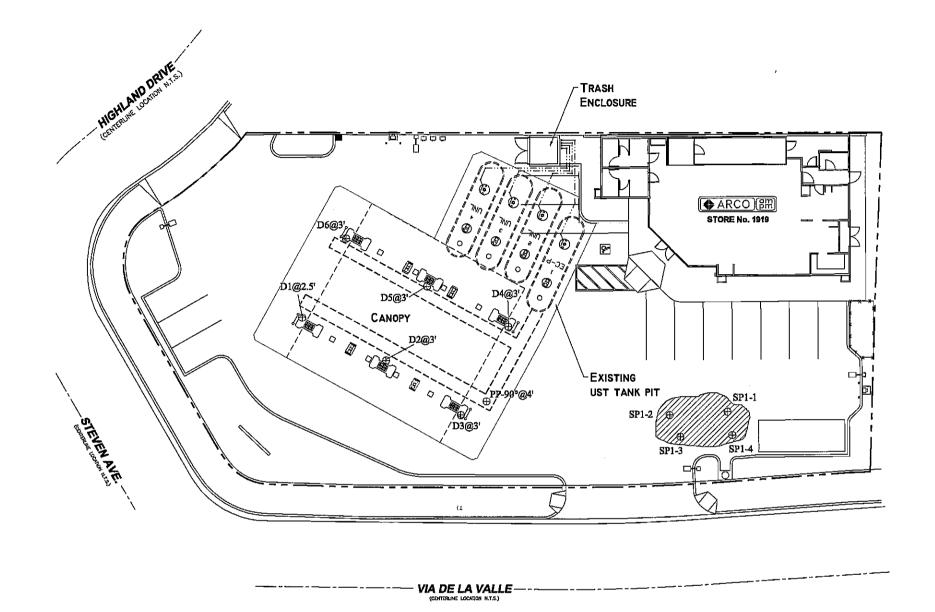




FIGURE







LEGEND:

D6@3⊕

DISPENSER SOIL SAMPLE LOCATION

PP-90°@4'⊕

PRODUCT LINE SOIL SAMPLE LOCATION
SOIL STOCKPILE SAMPLE LOCATION



SOIL STOCKPILE LOCATION

---- LIMITS OF EXCAVATION



PREPARED FOR:	
ARCO FACILITY #1919 660 Via de la Valle Solana Beach, California	

DRAWN BY:

JOB NUMBER:

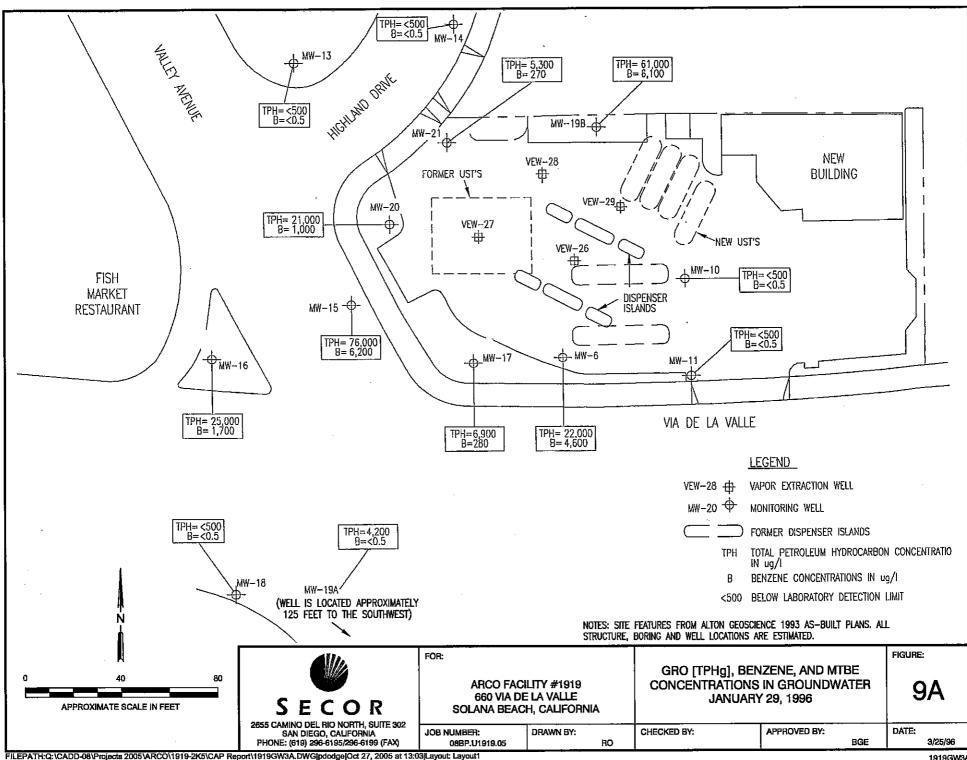
SITE PLAN WITH FUEL DISPENSER SAMPLE LOCATIONS

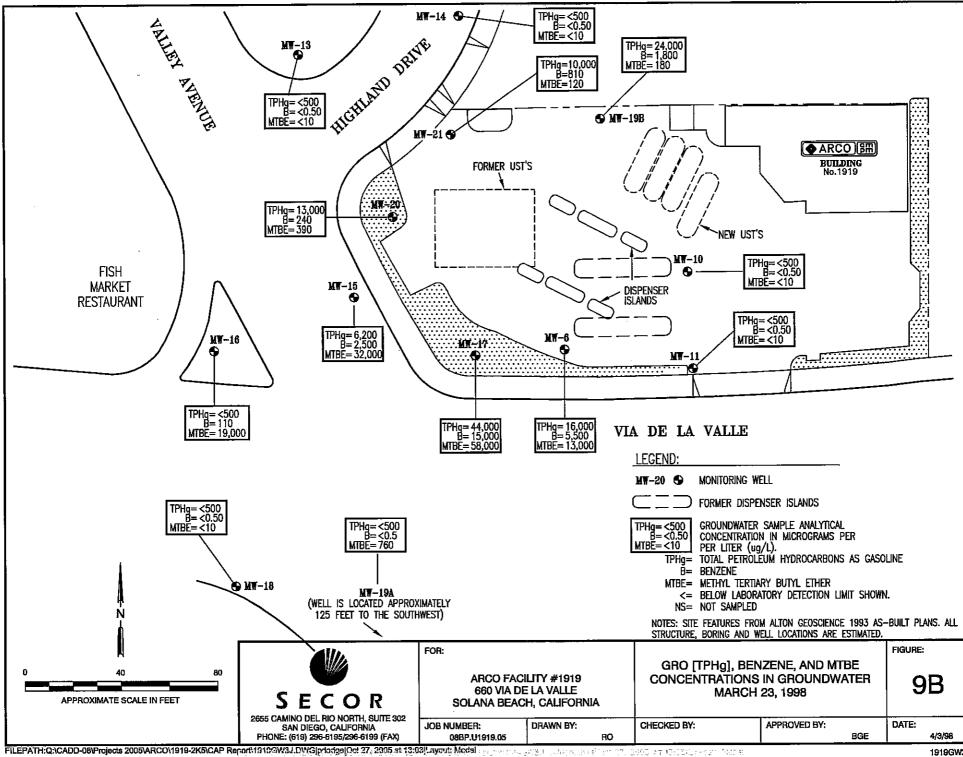
CHECKED BY: APPROVED BY: DATE:

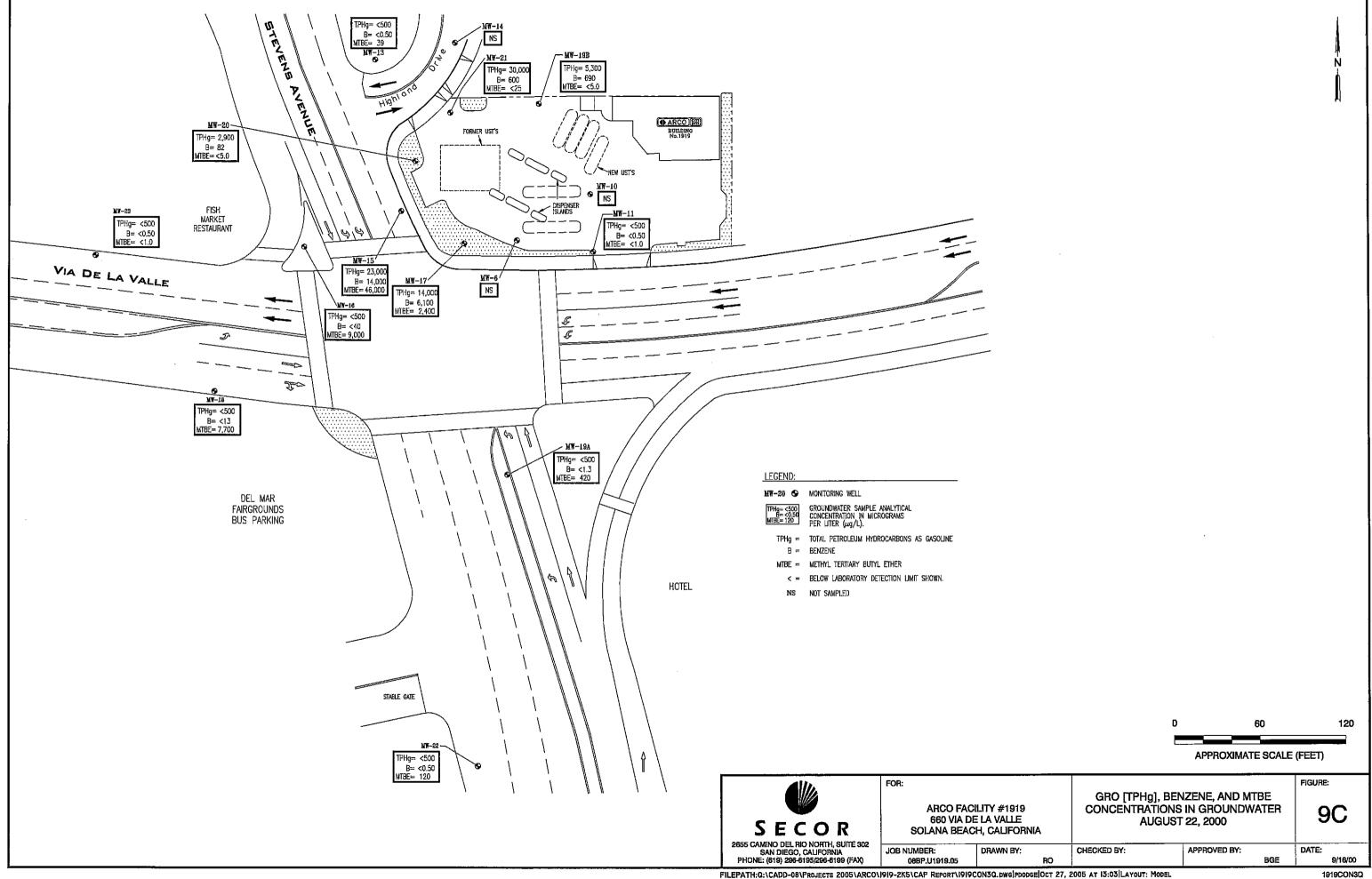
APPROXIMATE SCALE IN FEET

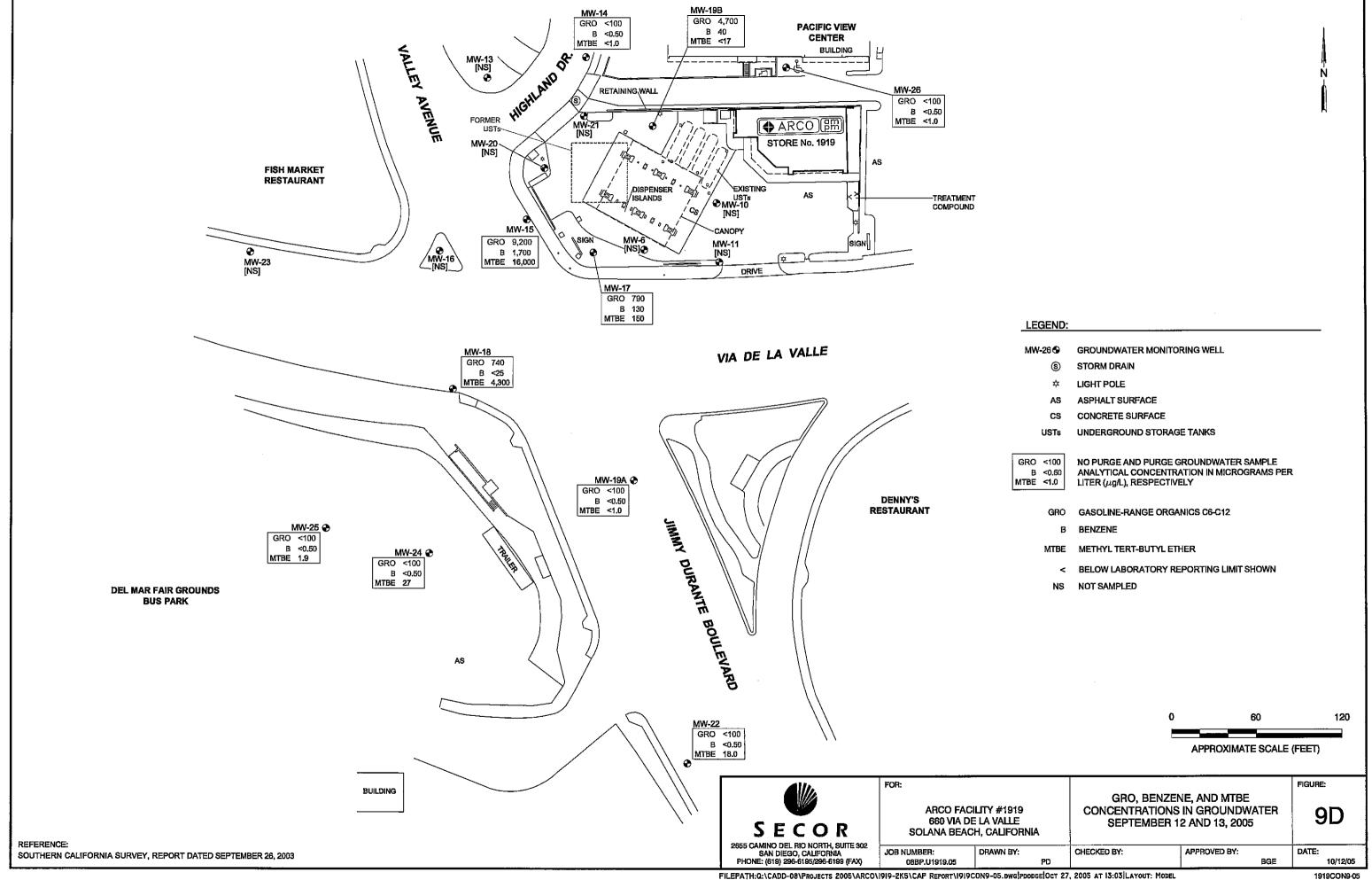
619-296-6195/Fax 619-296-6199 08BP.01919.04 PD

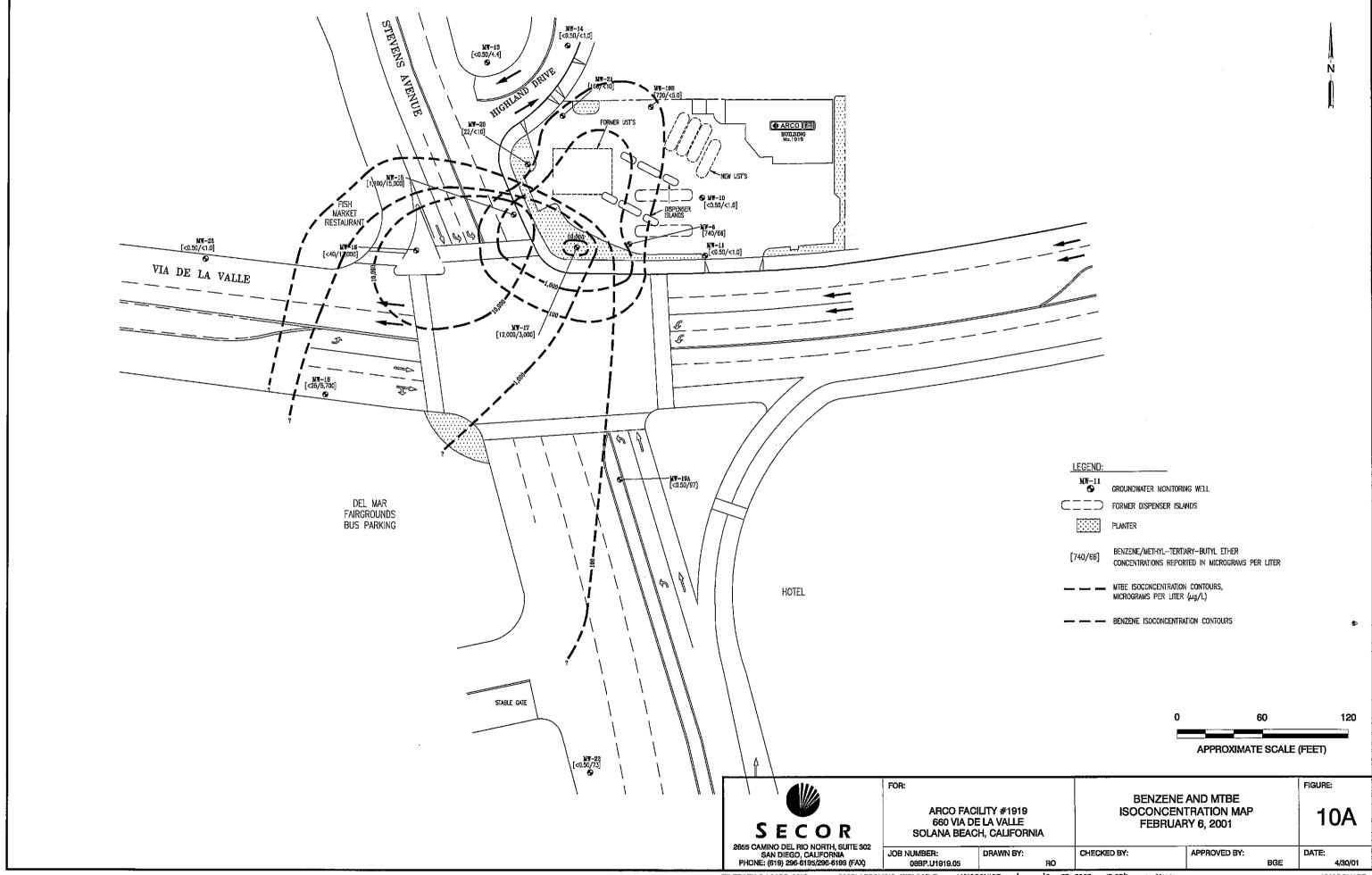
Q:\CADD-08\Projects 2005\ARCO\1919-2K5\CAP REPORT\1919SP2-03.DWG MODIFIED BY PDODGE ON OCT 27, 2005 - 13:02

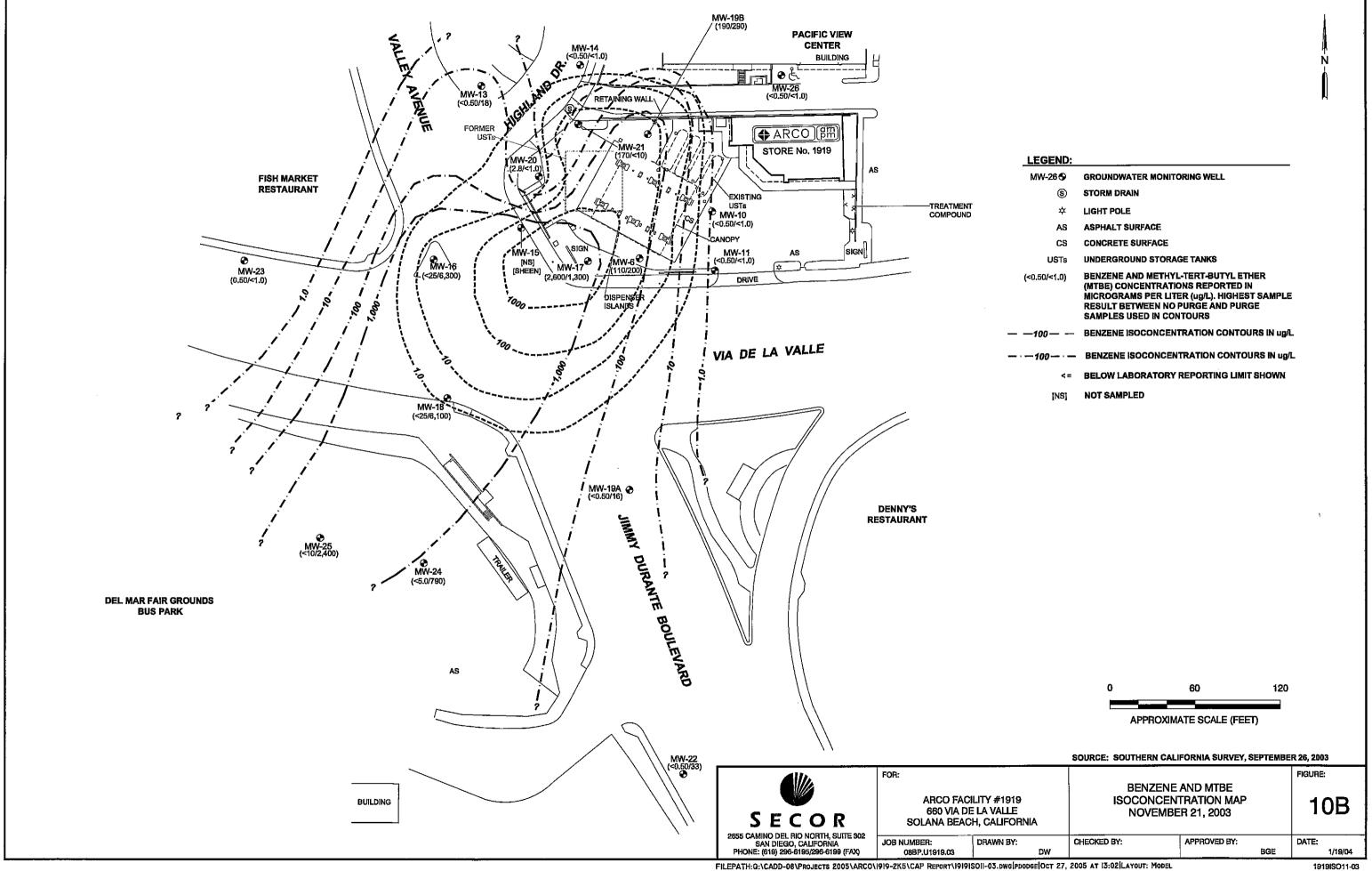


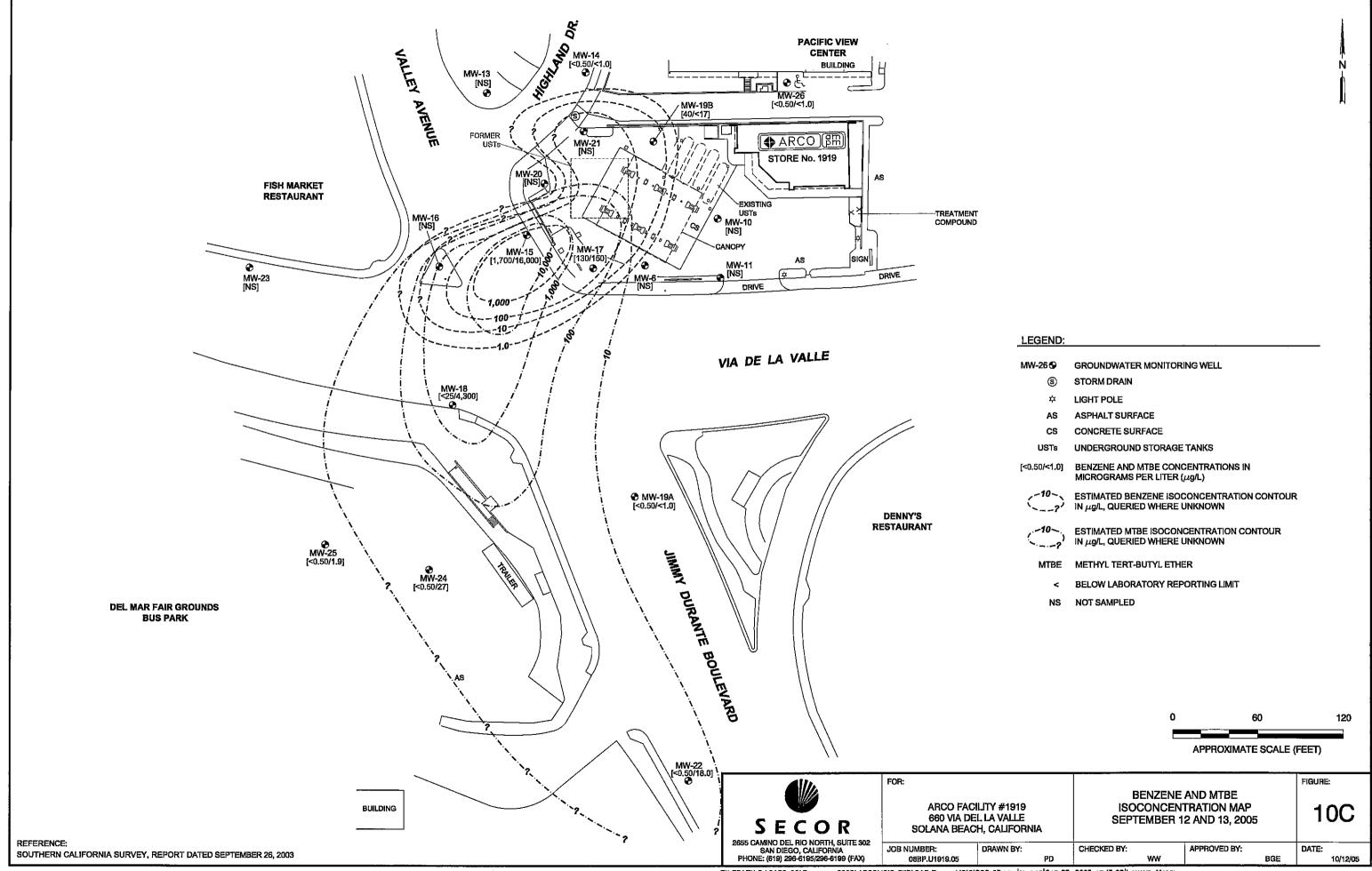












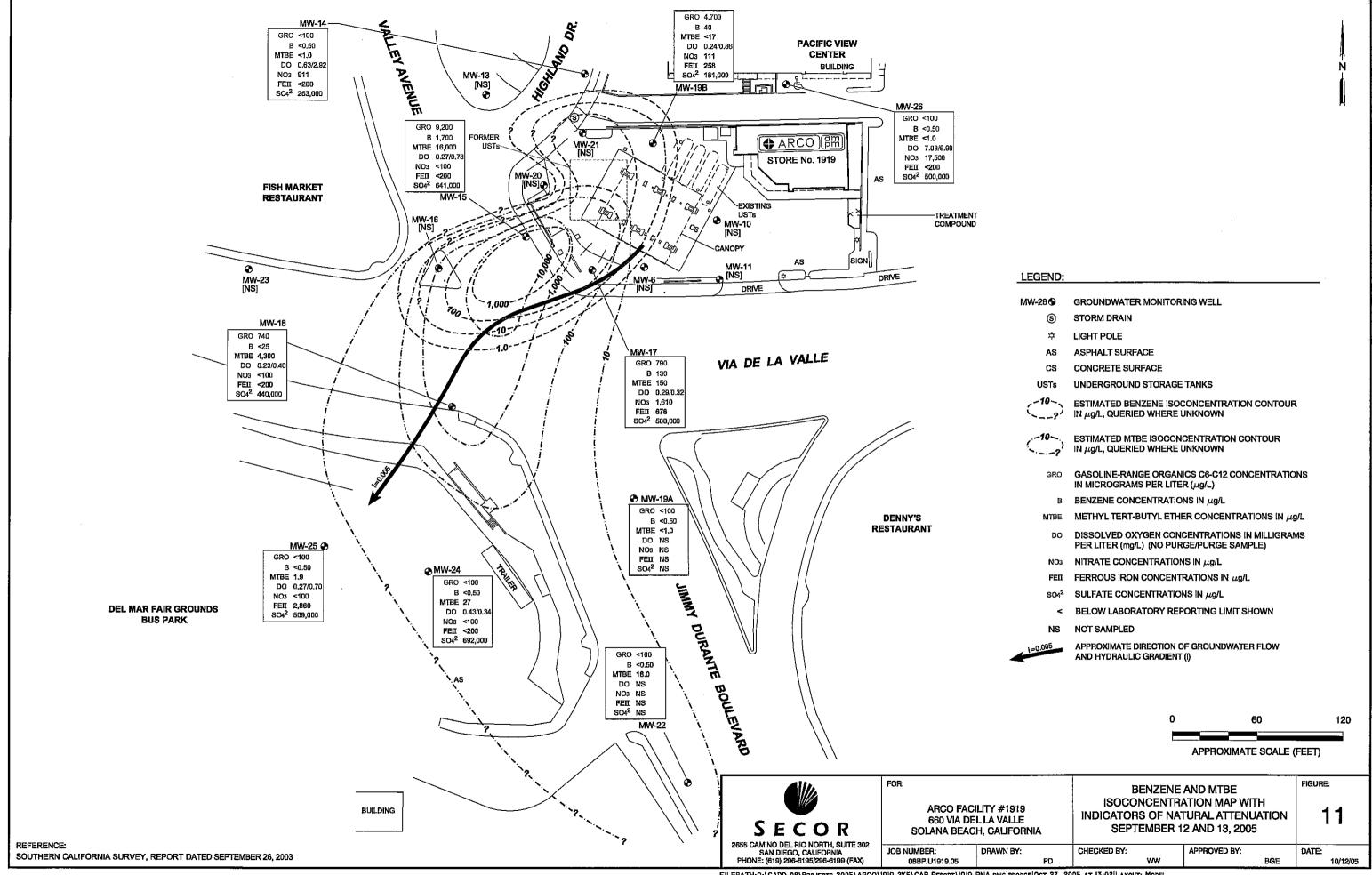


Figure 12A
Benzene Concentration Trend Evaluation - Well MW-16
ARCO Facility #1919

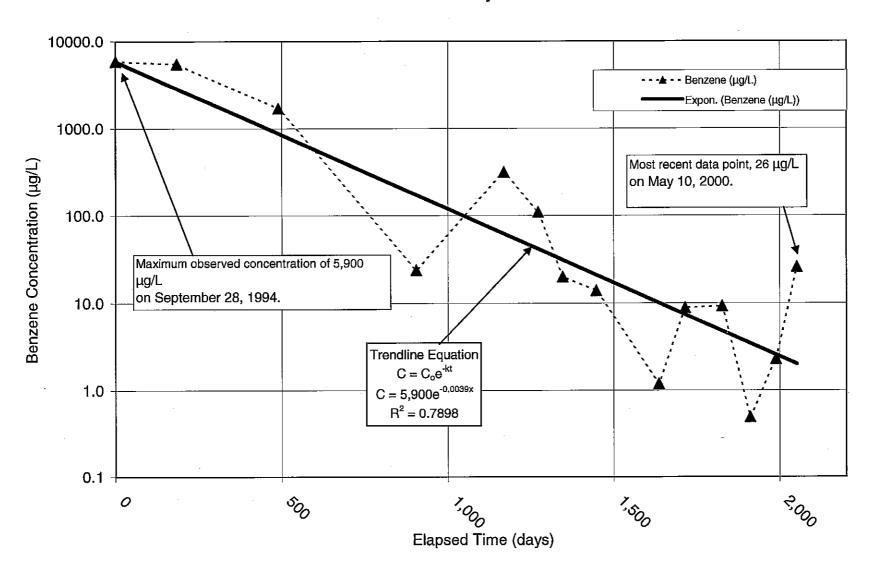


Figure 12B
MTBE Concentration Trend Evaluation - Well MW-16
ARCO Facility #1919

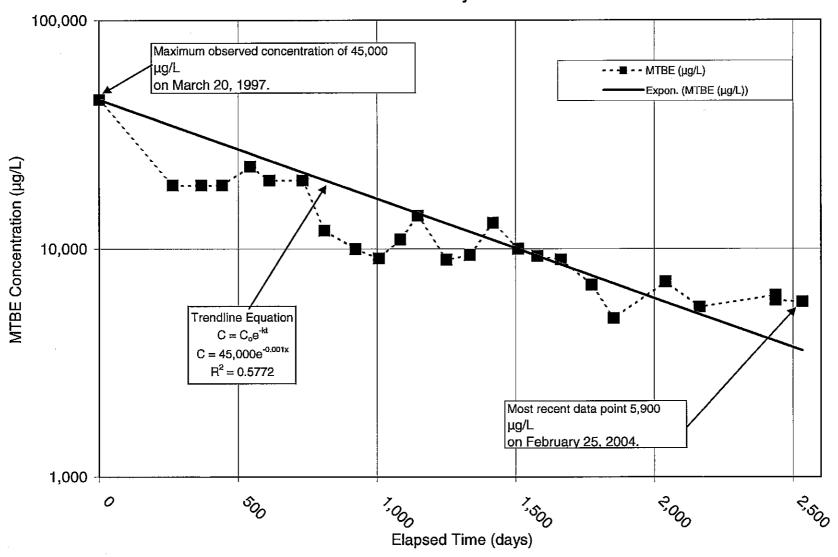
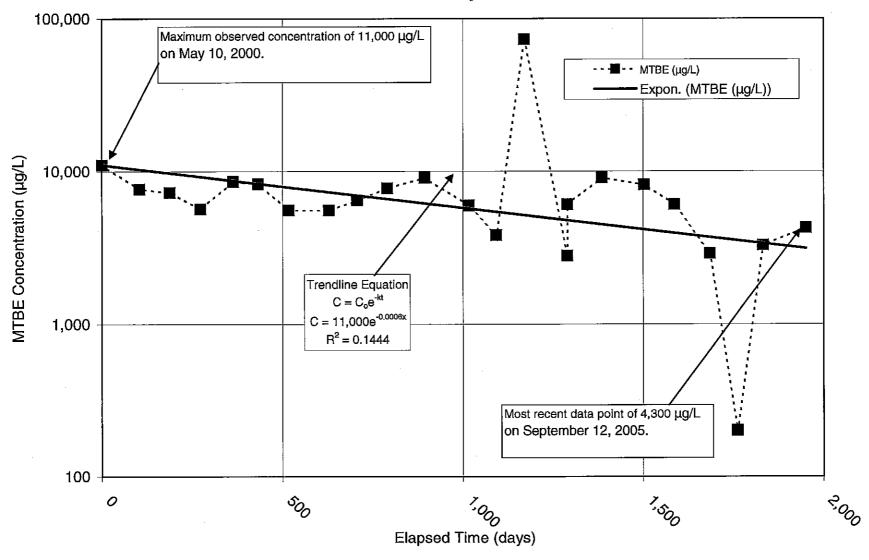


Figure 12C
MTBE Concentration Trend Evaluation - Well MW-18
ARCO Facility #1919



TABLES CORRECTIVE ACTION PLAN

ATLANTIC RICHFIELD COMPANY
ARCO Facility #1919
660 Via de la Valle
Solana Beach, California
SAM Case #H05166-002
SECOR PROJECT NO. 08BP.01919.07
October 21, 2005

TABLE 1

SUMMARY OF BENEFICIAL GROUNDWATER AND COASTAL WATER USES ARCO Facility #1919

San Dieguito Hydrologic Unit (HU 905.00) Solana Beach Hydrologic Area (905.10) Rancho Santa Fe Hydrologic Subarea (905.11)

Beneficial Use 💉	Groundwater	Surface Water
Municipal/Domestic Supply *	Χ	
Agricultrural Supply *	X	
Industrial Service Supply *	X	
Industrial Process Supply	* -	
Groundwater Recharge		
Freshwater Replenishment		
Navigation		
Contact Water Recreation (REC 1)		X
Non-contact Water Recreation (REC 2)		X
Commercial and Sport Fishing	,, <u></u>	
Biological Habitats of Special Significance		X
Estuarine Habitat		X
Wildlife Habitat		X
Rare, Threatened, or Endangered Species		X
Marine Habitat		X
Aquaculture		
Migration of Aquatic Organisms		X
Spawning, Reproduction, and/or Early Development		•
Warm Freshwater Habitat		
Shellfish Harvesting		

Notes:

- * = These beneficial uses do not apply westerly of the easterly boundary of the right-of-way of Interstate Highway 5 and this area is excepted from the sources of drinking water policy. The beneficial uses for the remainder of the hydrologic area are as shown.
- X = Existing Beneficial Use
- + = Existing Beneficial Use, but water quality does not meet criteria for municipal, and either agricultural, irrigation, or livestock watering.
- o = Potential Beneficial Use
- -- = No Existing or Potential Beneficial Use.

Source:

California State Water Resources Board and Regional Water Quality Control Board, San Diego Region "Water Quality Control Plan, San Diego Basin (9), 1994"

Sample Location	Date Sampled	Depth (ft)	GRO	DRO	- B - n	å. ∻T *	Ser Billion	X "	MTBE	TAME	DIPE"	ETBE"	TBA	Ethanol"	Source
			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					7,000							
Soil samples colle B-1/MW-1	ected by Alto	n Geoscie	nce, SECC	PR, and ot	hers during	previous	assessmen	t.	··					_	
D-1//VIVV-1	10/4/1990	. 5	<10												1
B-2/MW-2	10/4/1990	10	24,000		560	2,400	510	1,900							1
D:2/MW-2	10/4/1990	5	<10.	13:13 - 13:14											
B-3/MW-3	10/4/1990	10, ₄	<10 ↔	LILET,	. 10.56 %	0.76	0.40	1.3			TIS TON	The Control of the Late	Single of S	A CONTRACTOR OF THE PARTY OF TH	
D-3/1010V-3	10/4/1990	5	<10												
B-4		10	12		0.96	0.32	0.28	0.06							
17.5 19.12 014	10/4/1990	**************************************	≓<10 ⊪.		Arma - Es										
D.E.MAN	10/4/1990	1010	13		0.12	0.28	0.06	0.28							
B-5/MW-4	10/4/1990	5	82		<0.05	0.20	0.12	0.72							•
BORRES -	10/4/1990	10	<10												
== B-6/MW-5	10/5/1990	÷75 - 1 - 1	<10								11 TO THE P. LEWIS CO., LANSING MICH.	ing ent			
5 7/2 DA 6	10/5/1990	10	<10	tikraki	0.48	-0.40	্ল<0.05-⊹	0.36				# ### ####	4310 -2 777	Mayrar tala.	
B-7/MW-6	10/5/1990	5	<10												_
Control	10/5/1990	10	<10		<0.05	0.16	<0.05	<0.15							
B-8/MW-7	10/5/1990	₹ 5 . ‡	2,400	hull i na.	14	140	_3 29 ± ≠	150		ari j a -tajiji					
	- 10/5/1990	-::-85 E	47	* 74 - 34 5	ir is record	Commission of the second	Agrandar - Jarah		CANDELL BASE						
B-9/MW-8	10/5/1990	5	<10												
	10/5/1990	9	<10		1.3	1.5	0.16	1.1							
=:B-10/MW-10	2/12/1992	6.5	<5 ∹	Mara May			特切并引進			77-46-1214-1514					2
	2/12/1992	8.5	/			1 - MANTATORS (1917 - 1917) 1 - MANTATORS (1917 - 1917)	K. Britis								_
	2/12/1992	= 15.5 ·	<5		Can addition to		TOP SUPPLY SET	<u> </u>	445-45	ir prepare	personal s				
B-11/MW-11	2/12/1992	7	< 5								- <u></u>				
	2/12/1992	9.5	<5												
<u>.</u>	2/12/1992	12.5	<5												
. ■ B-12/MW-12	2/12/1992	75°6	<5					(Caroni sport	140.00		Lauring or of Alle.	TOTAL CONTRACTOR			
	-2/12/1992	9.5	<5			galata.	STEB						+ 1		
	2/12/1992	- 17/	:/ <5 ::		14 25 - 4 200	## * **70	. Artika		70 g 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			Contract Addition			
B-13/MW-13	2/12/1992	7.5	<5				-				<u></u>		SHEAT RESPONSE.		
	2/12/1992	9	<5												
	2/12/1992	16.5	<5												
B-14/MW-14	2/13/1992	6.5	₹.5 5	riogan 10 Phili Na System		alaj estra 1974 di hat. Albaj kaj kaj kaj k			Falley Commission						
Transport (1975) 1720 (1975) Phillips Let 1974 (1975) 1986 (1976) 1886 (1976)	2/13/1992	10.5	<5							organisa ngan Grafilang Maria	egjeg⊈±gty35†			The state of the s	i
	2/13/1992	16:	<5		1767 -				-14 <u>4</u> 147						

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

ARCO Facility #1919 (Results are reported in mg/kg)

Sample	Date	Depth	GRO	DRO	В.	A- T"	. Care rai	X :	MTBE"	TAME	DIPE	ETBE"	тва"	Ethanol	Source
Location	Sampled	., ≥ (ft)	- 16-12 P. 12.	EST STEEDING					E John Tight Son Ti						
B-15/MW-15	2/13/1992	7	1,100							-					2
	2/13/1992	8.5	1,200		2.700	21.000	8.100	50.000	 		 				-
	2/13/1992	16	<5	-				 							1
B-16/MW-16	2/13/1992	6	<5		GRANDS			inge - ape	146,744,05		Harried Lands				-
	2/13/1992	9.5	<5			Park Land		777 2010 1140				10.50			
B-16/MW-16	2/13/1992	17	<5								<u>en</u>				
B-17/MW-17	7/22/1992	4.5	<10 -		<0.05	<0.05	<0.05	<0.05		185054 - La					3 .
	-7/22/1992	- 6	<10	a Indiana da Par	godrafilk,			TO DESCRIPTION							
	7/22/1992	7.5	1,711		36.38	215.16	41.59	336,15						-40	1
	7/22/1992	10	_ <10 戻						10 P. P		garagea.	Security Committee			
B-18/MW-18	7/23/1992	7.5	<10				-								}
	7/23/1992	11	<10				-								
B-19/MW -19A	7/23/1992	7.5	<10				HTENAMES OF		lor a lett	4.7. 4. 65.4	Spring Color	especially de-		foligere was restrict	
	7/23/1992	⊕ 10.5⊤	<10				alay salayan Se		ing that (5) set on .		rest in the constraint	TELLY COMMON TO THE	Herbitan in de		
B-20	10/6/1993	5.5	<10						BEAUTY OF STREET						4
	10/6/1993	7.5	421		17.980	32.976	9.773	47.951				 			•
	10/6/1993	10.5	<10		-1										
B-21	10/6/1993	6.5	<10				lanti or an objection of the specific Hospital								
	10/6/1993	· 8,-	<10	1,421,14		E NEWS ST	13. 01. 30 pa 13. 13.			Admit tas e			The sweet of	inaneje k. • Janu ⊒⊇Janolio	
termina par	10/6/1993	10	68		<0.050	0.303	0.651	0.885			-		un library de la company		
DUP.	10/6/1993	_ 10 _	75. /11. /54		<0.050	<0.050	< 0.050	0.412			7-14			general e de ndición	
B-22	10/6/1993	7.5	<10								Lijerke in Nekuma in				
	10/6/1993	10.5	20,116		61.06	315.10	230.51	880.02							
	10/6/1993	13	<10												
DUP	10/6/1993	13	<10												
t⊪ B-23	10/6/1993	8.5	∺<10	11275				14-14-4		7944-1-715				en guide <u>al</u> an Aug	
Spirite Control Control Control Control	10/6/1993	10	· <10		ucar	E			internal Property				Market Berne		
	10/6/1993	311	<10		104 -4 50 3	7. (14 E.)	Mark 🖢 Vill	ira.				ri iya Matika			
B-24	10/6/1993	8.5	<10									Aviius egge		<u></u>	
Ī	10/6/1993	10.5	11,860		36.68	149.85	125.7	514.55							
	10/6/1993	12.5	20												
B-25	10/6/1993	7.5	<10	1942 - 1944 - 19		- Carlotty - L agrand									
	10/6/1993	10.5	<10									. 25 524 575 3 <u>1</u> 13 3 22 52 54 77 53 54			
	10/6/1993	12	<10				rigida zergand		#11415141414 }} 6 2 4 4			발표를 받고 있습니다. 기업자 기계 기계			
The state of the s		<u> </u>	<u>u kaj di tuti Puti (di li</u>	<u> </u>	<u></u>		3 6 M. E. J. D. B. 1997 1								

Sample	🍰 - Date 🚃 -	Depth	GRO	DRO	1 * B		Transia da	X	MTBE	TAME	DIPE:	ETBE"	TBA"	Ethanol"	Source
Location :	Sampled	≟ (ft) 🗇									2, 1, 500 Aug 12				
B-26	10/6/1993	6	<10						I	<u> </u>	<u> </u>				4
	10/6/1993	7.5	13,531	 -	179.67	403.83	172.13	643.97							- *
	10/6/1993	10.5	14										-		1
B-27	-10/6/1993	6	182		Ser Destruction		10 KM 12485.7		HILL WARREN			7 F LL : 45,1			1
:Charlebie	10/6/1993	7.5	6,852	Paris Tarrig	17.544	39.657	45.493	153.441		ferfige (er)					-
	10/6/1993	10.5	126									C traditare for			1
HA-7	8/14/1992	1.8	10,560										<u></u>	Tartina er edekted e 	5
	8/14/1992	4.8	7,894	-											
	8/14/1992	8.8	139,439		694.2	2,741.80	1,393.0	4,900.80				·			1
	8/14/1992	8.8	76,887												•
MW-19/MW -19B	4/13/1994	7.5	- <10 □			Pagazor I	-015#1 -4 75/ED		4984. PS		ropalier.				6
	4/13/1994	10	<10.		Nacional Carried								Taligram		"
	4/13/1994	11.5	5,763												
	4/13/1994	12.5	9,379	rywithing.	<5.0	<5.0	104.0	428.5	the care	. 4					
DUP	4/13/1994	12.5	9,687	and the second											
	4/13/1994	15.5	<10	14. L -1 4.	an Seed in		n de en antar	2,000 <u>-</u> -300	EL HATT	14-07 -1 7-05-0	1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00 1.5.00				
MW-20	4/13/1994	6	<10												
	4/13/1994	7.5	<10												
	4/13/1994	9	2,593												
	4/13/1994	15	<10												
MW-21	4/13/1994	7.5	<10				- GUBA DIL							 . Îde e ⊫e eistê û	
	4/13/1994	- 8.5	13,460		28.2	182.1	116.9	783.6							
	4/13/1994	12	29												
MW-22	7/11/2000	5	<10		<0.002	<0.002	<0.002	<0.004	<0.005						
Ī	7/11/2000	10	<10		<0.002	<0.002	<0.002	<0.004	<0.005						
/ MW-23	7/11/2000	5	<10		<0.002	<0.002	<0.002	<0.004	<0.005	Transport death (Art Art)					
	7/11/2000	-10	~√10·⊹		<0.002	<0.002	<0.002	<0.004	<0.005	Sp. Linds		5/% 5 -144	- 10 May - 14 M		
PL-1	9/26/1990	5	3,200												1
	9/26/1990	9	21,000		21	500	220	1,200							•
PL-2	9/26/1990	5	<10			7850E430Å3						Albertania (May 1 - 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	rijata se artai r	
	9/26/1990	9	₹10 ·		0.06	0.18	<0.05	<0.15	NE DEFE						
PL-3	9/26/1990	5	<10						<u></u>	. <u></u>	<u>Sanga Bulbundan</u> 		January Marian Mari	Eart By Co. 151	
ţ	9/26/1990	9	7,600		0.24	10	7.4	45							
∃ PL-4	9/26/1990	5 5		Athydaidegad	' Harris II, bijir i	4/16/ 11 /66/4		43						Name and the Colorest	
yayayarai (9/26/1990	-9	7,800		2.0	- 96	81	370				Nibal y yya (Ciriralya (i			

Location PL-5	Sampled	The second second	GRO	DRO	В.	T 4	+ * E *	X	MTBE	TAME"	DIPE"	ETBE	TBA"	Ethanol"	Source
PL-5		(ft)	76-127-28 (7867) (1947) (1												S Early
	9/26/1990	5	<10												1
	9/26/1990	9	240		0.07	0.15	<0.05	<0.15							•
PL-6	9/26/1990	5	800	Marca <u>ala</u> a awaa a	Local Call Call Call Call Call Call Call C							137, 44 0.70		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
	9/26/1990	9'	150		<0.05	3.3	6.8	47				200 24 3 C			1
PlA-1	10/20/1993	3	231									<u> </u>			1
PLA-2	10/20/1993	3	3,459		(distribution)	gra, chen				CENTRAL APPR	11 (<u>-</u> 105)		. 1466 1- 26.1	. \$3 . \$3	1
PLA-3	10/20/1993	3	<10												†
	10/20/1993	+ 3 ·	-6,749		39.28	159.62	55.64	313.88						. 1979 - 11 77-	1
PLA-5	10/20/1993	3	3,250						- 1 C 2 Marin 11 T					<u> 28 g [[] 3 g 4] </u>	-
PLA-6	10/20/1993	3	72	14.8333541 24.431343									34¥54		-
PLA-7	10/20/1993	3	<10				44								1
PLA-8	10/20/1993	. : : 3	533					112012	Yan de		CE QEIRO	1.00	jeri er jekto		1
PLA-9	10/20/1993	3	583												1
PLA-10	10/20/1993	3	<10				- Jac						المناسبة الم		1
PLA-11	10/20/1993	3	196									<u></u>			<u> </u>
- PLA-12	10/20/1993	3	3,842				13-58-49-352		4, 144 <u>-124</u> A-5	TAT - 22 (8): 1	- (414. <u>41</u> 4.6	della jar			-
S-1	10/20/1993	9.5	404							rije-rrija. ••			Arigina Barrian	<u>-97-14 7 .41 6</u>	
- SR-1	1/24/1994	5	<10		Brok ist		in green light	of the						er Silvani (Spri	
TR-1	3/1/1994	3	<10				<u></u>		<u></u>			<u> </u>			
TR-2	3/1/1994	3	<10	rangalaini albahin arawan							ia yyyka zilaya. Nga gharia	44일 4 및 1			
TR-3	3/1/1994	3	<10						<u></u>		Martina Veta.	11/11/11/11/11/11/11/11/11/11/11/11/11/	<u> </u>		
VEW 26	4/13/1994	7·	<10		Arga <u>i</u> ta	ag 🏰 yan	ringer en alle grand.			and surely de		ofigi <u>o</u> rgijaa	te e de la company		6
	4/13/1994	10	7,503		83.70	475.70	169.90	979.50			and the second of				"
DUP	4/13/1994	. 10	7,317		93.80	530.70	190.10	1,113.00		#####################################					
	4/13/1994	1.4	5,732			file (+y) yes			g for a nd or				[347]2_1.454		
VEW 27	4/13/1994	5	<10					<u>••</u>						<u></u>	
Ī	4/13/1994	7.5	283												
VEW 28	4/13/1994	-= -8	+ <10 ±						San Carrie	. 15 (2 14 2 2 4 1 1 1 1					
	4/13/1994	√ 9.5 ±	233	114410								1944 - J. 1409 - 1			
	4/13/1994	10.5	1,381												
	4/13/1994		66,463		304	1,658	642 -	3,850	na Juga Nata		t partie teatre. Et les 44 part 4		* -0. 55 ,42,50 .7.862224 6 4		

Sample	Date	Depth -	GRO	DRO	:	graja T ili sag	-43 E - 4	- x"	мтве	TAME"	DIPE	ETBE"	TBA"	Ethanol	Source
Location L	Sampled •	(ft)													
Soil samples colle	ected by SEC	OR during	air sparge	well inst	allation.					14 may 145 14 15 36	<u> </u>	<u> </u>	<u> </u>		Transfer for
SP1-15'	3/28/1995	15	19		1.8	0.46	0.33	1.3		T		Τ			7
SP2-5	3/29/1995	3 5	38	na Jeange Leiseig August 1974 – Daith	The state of the s			14 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4						varande.	′
SP2-10',	3/29/1995	10.	120	- 1. Pr-1. 19.	2.0	3.2	4 i 1.7	9.1	Sinth of the Tries	Ha P. III	10.45.42.00		ing pina <u>t</u> yearn)		
SP2-15' . ■ .	3/29/1995	- 15	14		Company College								Full Texture 1		
SP3-10'	3/28/1995	10	5,700		12	210	96	610			- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			<u> </u>	
SP3-15'	3/28/1995	15	12										77		
SP4-15'	3/28/1995	3-15	4=-16		1.3	0.84	0.29	1.2				201101111111111111111111111111111111111			
SP5-15 ¹	3/29/1995	15	<10		0.17	1.1	0.23	1.4							
SP6-5'	3/28/1995	振手5二編	(- < 10 · ·	es wi st det			195. - - 1 5.					Jan Ber	7 5 4 54	Edit, Atom	
SP6-10'	3/28/1995	==10-=	- 19		0.29	1.7	0.57	3.0		Trick of the second			er i de la		
SP7-10'	3/28/1995	10	3,300		<5	<5	24	25							
Soil Samples colle	ected by SEC	OR during	g pipeline a	nd disper	ser upgra	de activitie	s.			<u> </u>	<u> </u>	.1	<u> </u>	l	
- D1@2-1/2	1/9/2003	2.5	<10" ·	11				ationi ci ștar							8
D2@3'	1/9/2003	2	<10	34	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.30	
- D3@3'	±1/9/2003	- 1. 3	<10	8.4	Bouge Edi		156 445 5165		rasta-tha	Najvaja projektaja				144 av 4- av 4	
D4@3'	1/9/2003	3	<10	<5.0					= 3 () (n						
D5@3' ==	1/9/2003	3	<10	3 3	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.30	
D6@3'	1/9/2003	3	<10	6.7											
PP-90°@4'	1/9/2003	4	. ₹10	10								The second se	n dina di desari	#47 4 440	
Stockpile soil sam	ples collecte	d by SEC	OR during	pipeline a	nd dispens	er upgrad	e activities.	Appropriate and a second		a man have the	1		7,770	engera <u>e e e e e e e</u>	
SP1-1-	1/20/2003	∴ N/A	∃<10-≛-		<0.0020		⊢<0.0020	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.30	
SP1-2	1/20/2003	N/A	<10	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050.	<0.0050			<0.10	<0.30	
SP1-3	1/20/2003	N/A	<10	The state of the s	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.30	
SP1-4	1/20/2003	N/A	·: '<10 _::		<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.30	ļ
Soil Samples colle	cted by SEC	OR during	the most	recent off-	site asses	sment acti	vities.	<u> </u>		- way neg a gr		<u> </u>	[10.00	
MW-24	10/1/2003	5	<10		<0.0020	<0.0020	<0.0020	<0.0040	0.019	<0.0050	<0.0050	<0.0050	<0.10	<0.30	9
	10/1/2003	10.5	<10		<0.0020	<0.0020	<0.0020	<0.0040	0.054	<0.0050	<0.0050	<0.0050	<0.10	<0.30	Ĭ
	10/1/2003	15.5	<10		<0.0020	<0.0020	<0.0020	<0.0040	0.0076	<0.0050	<0.0050	<0.0050	<0.10	<0.30	-
	10/1/2003	20.5	<10		<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.30	i
MW-25	10/1/2003	4 -	<10		<0.0020	<0.0020	<0.0020	<0.0040	0.067	<0.0050	<0.0050	<0.0050	<0.10	<0.30	
	10/1/2003	5 5	<10		<0.0020	<0.0020	<0.0020	<0.0040	0.22	<0.0050	<0.0050	<0.0050	<0.10	<0.30	
	10/1/2003	15.5	- <10		<0.0020	<0.0020	<0.0020	<0.0040	0.083		<0.0050				
and the second s			protect Obeside	naus augs, 12 gC/				0.0040	0.003	O:0030	~U.UU3U	<0.0050	<0.10	<0.30	

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

(Results are reported in mg/kg)

Sample Location •	Date Sampled	Depth (ft)	GRO	. DRO	в "	7	- 127 E - 1	X "	MTBE"	TAME"	DIPE"	ЕТВЕ	тва"	Ethanol"	Source
MW-26	10/2/2003	10.5	<10		<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	<0.30	0
	10/2/2003	20.5	<10		<0.0020	<0.0020	<0.0020	<0.0040		<0.0050			10110	<0.30	9
, and the second	10/2/2003	30.5	<10		<0.0020	<0.0020	<0.0020	<0.0040		<0.0050				<0.30	
Notes:	10/2/2003	40.5	<10		<0.0020	<0.0020	<0.0020	<0.0040		<0.0050				<0.30	i

Notes:

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015 Modified

TPHd = Total petroleum hydrocarbons as diesel fuel by EPA Method 8015 Modified

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total xylenes

MTBE = Methyl tertiary butyl ether (analytical results by EPA Method 8021B, unless noted otherwise.)

TBA = Tert-butyl alcohol (by EPA Method 8260B)

DIPE = Di-isopropyl ether (by EPA Method 8260B)

ETBE = Ethyl tert-butyl ether (by EPA Method 8260B)

TAME = tert-Amyl methyl ether (by EPA Method 8260B)

mg/kg = All results reported in milligrams per kilogram

DUP = Duplicate Analysis

-- = Not Analyzed

< = Less than indicated laboratory reporting limit

/ # = Alternative sample location identifier.

" = BTEX and MTBE analytical results by EPA Method 8021B prior to 2003, and from 2003 to present by EPA Method 8260B.

Sources:

- 1 Alton Geoscience, 1994, Remedial Action Plan for ARCO Station 1919, 660 Via de la Valle, Solana Beach, California (Case No. T01911/H05166-002), dated May 13, 1994.
- 2 Alton Geoscience, 1992, Transmittal of Data for Soil Borings and Ground Water Monitoring Wells, ARCO Station 1919, 660 Via de la Valle, Solana Beach, California, dated May 4, 1992, Appended Enseco Laboratory Report, dated March 10, 1992.
- 3 SECOR International Incorporated, 2000, Site Assessment Report, ARCO Facility #1919, 660 Via de la Valle, Del Mar, CA, SAM Case # H05166, dated October 20, 2000.
- 4 Alton Geoscience, 1993, Transmittal of Data for Borings and Ground Water Monitoring Wells at ARCO Station 1919, 660 Via de la Valle, Solana Beach, California, dated December 3, 1993; Appended Transglobal Environmental Geochemistry Laboratory Report, dated October 11, 1993.
- 5 Alton Geoscience, 1992, Laboratory Results of Soil Samples Collected Following Product Line Leak at ARCO Station 1919, 660 Via de la Valle, Solana Beach, California, dated September 23, 1992.
- 6 Alton Geoscience, 1994, Transmittal of Data for Ground Water Monitoring and Vapor Extraction Wells at ARCO Station 1919, 660 Via de la Valle, Solana Beach, California, dated May 11, 1994; Appended Transglobal Environmental Geochemistry Laboratory Report, dated April 16, 1994.
- 7 SECOR International Incorporated, 1995, Air Sparging Well Installation Letter Report, ARCO Facility # 1919, 660 Via de la Valle, Solana Beach, California, dated June 8, 1995.
- 8 SECOR International Incorporated, 2003, Fuel Line/Dispenser Replacement Report, ARCO Facility No. 1919, 660 Via de la Valle, Solana Beach, California, dated March 28, 2003.
- 9 Del Mar Laboratory Report attached as Appendix J.

TABLE 2B SOIL PHYSICAL PROPERTIES ANALYTICAL DATA ARCO Facility #1919

				Total Pore Fluid	25.0 PSI Confining Stress	Den	sity		Porosity, % VI	P (3)	
Sample ID	Date Sampled	Depth (ft)	Moisture Content (% wt)	Caturations	Native State Effective Permeability to Air ⁽²⁾ (millidarcy)	Bulk (g/cc)	Grain (g/cc)	Total	Air Filled	Effective	Total Organic Carbon (mg/kg)
NINEY-E CALS			(ASTM D2216)		(A	PI RP40)	er yr Joseff	12. 42. 12. 12. 14. 14. 14. 14. 14. 14. 14. 14. 14. 14		(ASTM D425M)	(Walkley-Black)
MW-24	10/01/03	5.5'	65.1	>99.9	0.651	1.02	2.61	54.0	<0.1	17.3	18,500
MW-25	10/01/03	5.5'	46.0	>99.9	77.2	1.24	2.64	44.8	<0.1	19.7	4,000
MW-26	10/02/03	5.5'	6.3	21.1	1,561	1.46	2.65	45.0	35.5	31.1	540

Notes:

Pv = Pore volume

PSI = Pounds per square inch

g/cc = grams per cubic centimeter

Vb = Bulk volume

mg/kg = milligram per killogram

- (1) Water = 0.9981 g/cc; Hydrocarbon = 0.7500 g/cc
- Native State, as received with pore fluids in place

 Total Porosity = no pore fluids in place; all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

	Particular to the particular as as	ARCO Facility	Line of a section of a section of	F	Lest year and a set
Well Identification / Surveyed Well Elevation ¹ (Feet MSL)	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater Elevation ² (Feet MSL)	Source
MW-1	10/10/90	9.15	0.37	5.15 ³	1
	12/19/91		Not Measured		
14.02	02/18/92	8.29	0.25	5.92 ³	2
	05/26/92	8.26	0.20	5.91 ³	
	07/30/92	8.15	0.19	6.01 ³	
	10/08/92	7.99	0.03	6.05 ³	
	01/14/93	7.69	0.01	6.33 ³	
	02/20/93	7.69	Sheen	6.33	
İ	03/16/93	7,77	Sheen	6.25	
	04/14/93	7.64	Sheen	6.38	
	05/10/93	7.99	0.03	6.05 ³	
	09/02/93	8.13	0.05	5.93 ³	
	10/01/93		Well Destroyed		
MW-2	10/10/90	8.26	0.00	4.67	1
	12/19/91		Not Measured		•
12.93	02/18/92	7.07	0.00	5.86	2
	05/26/92	7,13	0.04	5.83 ³	~
	07/30/92	7.16	0.28	5.98 ³	
eding at the estimate	10/08/92	6.98	0.03	5.97 ⁸	•
	01/14/93	6.98	Sheen	5.95	
	02/20/93	6.77	Sheen	6.16	
	03/16/93	6.72	Sheen	6.21	
	04/14/93	6.80	Sheen	6.13	
	05/10/93	6.90	Sheen	6.03	
	09/02/93	7.08	Sheen	5.85	
	10/01/93		Well Destroyed		
MW-3	10/10/90	7.69	0.00	4.86	1
12.55	12/19/91	8.09	0.00	4.46	•
	02/18/92	6.81	0.00	5.74	2
`	05/26/92	6.40	0.00	6.15	_
	07/30/92	6.80	0.00	5.75	
	10/08/92	6.98	0.00	5.57	•
	01/14/93	8.38	0.00	4.17	
	02/20/93	6.86	0.00	5.69	
	03/16/93	6.84	0.00	5.71	
	04/14/93	6.94	0.00	5.61	
ľ	05/10/93	6.79	0.00	5.79	
•	09/02/93	6.99	0.00	5.56	
-	10/01/93		Well Destroyed	0,00	
MW-4	10/10/90	8.14	0.04	5.23 ³	1
	12/19/91		Not Measured		•
13.34	02/18/92	7.42	. 0.01	5.93 ^{.3}	2
n aktori oʻrtiga toʻrti ilga ilga ilga ilga ilga ilga ilga ilg	05/26/92	7.50	0.10	5.92 ³	<u>-</u>
	07/30/92	6.80	Sheen	6.54	
	10/08/92	6.98	Sheen	6.36	
entrophysica projek jek i Carbon Marada jed b zautropki silani skopina zavijednika i sale di	01/14/93	7.28	Sheen	6.06	
	02/20/93	7.01	Sheen	6.33	
num see see agains committe agreeme per um en light competition for the enright SPAGE of Light	and the second of the second o	(4.11)、1.14日(古典は古典は東京には、127)(「4.11年2月21)(東京は野港村の設定)(1.55 1.55 5 5 1.5		

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /					
Surveyed Well				Groundwater	
Elevation ¹	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)					
MW-4	04/14/93	7.14	Sheen	6.20	2
cont'd	05/10/93	7.29	0.00	6.05	_
	09/02/93	7.37	0.00	5.97	
	10/01/93		Well Destroyed	·	
MW-5	10/10/90	9.27	0.00	5.27	,1
	12/19/91		Not Measured		
14.54	02/18/92	8.88	0.28	5.87 3	2
	05/26/92	8.92	0.34	5.88 ⁸	
	07/30/92	8.86	0.36	5.95 ⁹	
	10/08/92	8.68	0.21	6.02	
	01/14/93	8.56	0.01	5,99 ³	
sagaren errikaren alari eta	02/20/93	8.16	Sheen Sheen	6.38	
	03/16/93	8.31	0.02	6.25 ³	
	04/14/93	8.47	0.09	6.14	
	05/10/93	8.64	0.16	6.02 ³	•
	09/02/93	8.88	0.30	5.88 ⁸	٠ .
	10/01/93		Well Destroyed		
MW-6	10/10/90	8.64	0.00	4.37	1
13.01	12/19/91	8.90	0.00	4.11	•
	02/18/92	7.91	0.00	5.10	2
	05/26/92	7.95	0.00	5.06	
	07/30/92	7.92	0.00	5.09	
	10/08/92	7.90	0.00	5.11	
	01/14/93	7.81	0.00	5.20	
	02/20/93	7.47	0.00	5.54	
	03/16/93	7.65	0.00	5.36	
	04/14/93	7.80	0.00	5.21	
	05/10/93	7.81	0.00	5.20	
	09/02/93	7.97	0.00	5.04	
16.11	06/29/94	9.94	0.00	6.17	3
	09/28/94	10.14	0.00	5.97	
	03/31/95	9.53	0.00	6.58	
	06/06/95	9.72	0.00	6.39	
	09/05/95	9.98	0.00	6.13	
	10/26/95	10.08	0.00	6.03	
	01/29/96	9.95	0.00	6.16	
	04/11/96	10.04	0,00	6.07	
	07/10/96	10.10	0.00	6.01	
	10/01/96	10.18	0.00	5.93	
	03/20/97	9.85	0.00	6.26	
	06/06/97	10.13	0.00	5.98	
	09/16/97	10.19	0.00	5.92	
	12/10/97	10.09	0.00	6.02	
	03/23/98	9.66	0.00	6.45	
	06/05/98	9.98	0.00	6.13	
	09/14/98	10.03	0.00	6.08	
	11/23/98	10.06	0.00	6.05	
	03/22/99	10.04	0.00	6.07	
	06/09/99	9.95	0.00	6.16	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /		Anco racinty			en a de la compania dela compania del la compania de la compania del compania de la compania de la compania del
Surveyed Well				Groundwater	
Elevation ¹	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)				Lievation (Feet WSL)	
MW-6	09/28/99	10.04	0.00	6.07	3
Cont'd	12/22/99	10.09	0.00	6.02	
	03/08/00	9.96	0.00	6.15	
	05/10/00	10.09	0.00	6.02	
	08/22/00	10.17	0.00	5.94	
	11/14/00	10.16	0.00	5.95	4
	02/06/01	9.93	0.00	6.18	•
	05/08/01		Not Measured	3.10	
	07/16/01	10.05	0.00	6.06	
	10/09/01	10.21	0.00	5.90	
	01/28/02	10.13	0.00	5.98	
	04/17/02	10.10	0.00	6.01	
!	07/09/02	10.17	0.00	5.94	
	10/21/02	10.44	0.00	5.67	
a kawa	02/21/03	10.27	0.00	5.84	
	05/08/03	10.47	0.00	5.64	
	07/25/03	10.39	0.00	5.72	
15.96	11/21/03	10.66	0.00	5.30	
	02/25/04	10.52	0.00	5.44	5
	06/21/04	10.55	0.00	5.41	ð
	09/13/04	10.78	0.00		
•	12/10/04	10.62	0.00	5.18	
İ	03/07/05	9.84	0.00	5.34	
	05/16/05	10.28	0.00	6.12	
	09/12/05	10.59	0.00	5.68	
MW-7	10/10/90	7.65		5.37	
	12/19/91		0.00 Not Measured	4.82	1
12.47	02/18/92	7.91	0.96	5.28 3	~
	05/26/92	7.95	0.95	4.56 ³	2
	07/30/92	7.92			
	10/08/92	7.90	Sheen	4.55	
ante programma e per al la como de la como de la como de la como de la como de la como de la como de la como d La como de la	01/14/93	7.90	Sheen	4.57	
	02/20/93	6.61	Sheen	5.47	
	03/16/93		0.29	6.08 3	
di Barria de la la la la la la la la la la la la la	03/14/93	6.83	0.02	5.66	
	05/10/93	6.88	0.14	5.70 3	
		6.95	0.03	5.54	
No la compara de la particulario de la compara de la compa	09/02/93	7.03	Sheen -	5.44	
MW-8	10/01/93		Well Destroyed		
IVIVV-O	10/10/90	8.32	0.03	5.53 ³	1
13.83	12/19/91	0.44	Not Measured		
13.63	02/18/92	8.14	0,26	5.89 ³	2
	05/26/92	8.16	0.26	5.87 ³	
-	07/30/92	8.08	0.27	5.95 ³	
	10/08/92	7.89	0.08	6.00 ³	
ļ	01/14/93	7.80	0.01	6.04 ³	
ļ	02/20/93	7.51	Sheen	6.32	
]	03/16/93	7.61	Sheen	6.22	
	04/14/93	7.70	0.02	6.15 ³	
	05/10/93	7.86	0.07	6.02 ³	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification / Surveyed Well				Groundwater	
Elevation ¹ (Feet MSL)	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater Elevation ² (Feet MSL)	Source
MW-8	09/02/93	7.99	0.08	5.90 ³	2
cont'd	10/01/93		Well Destroyed	0.00	~
MW-10	02/18/92	9.26	0.00	5.80	
15.06	05/26/92	9.11	0.00	5.95	
	07/30/92	9.00	0.00	6.06	
	10/08/92	9.06	0.00	6.00	
	01/14/93	9.00	0.00	6.06	
	02/21/03	7.65	0.00	7.41	
	03/16/93	7.78	0.00	7.28	
	04/14/93	8.93	0.00	6.13	
	05/10/93	8.98	0.00	6,08	
	09/02/93	9.13	0.00	5.93	
16.74	06/29/94	10.48	0.00	6.26	3
	09/28/94	10.72	0.00	6.02	.
	03/31/95	10,07	0.00	6.67	
	06/06/95	10.29	0.00	6.45	
	09/05/95	10.53	0.00	6.21	
	10/26/95	10.64	0.00	6.10	
	01/29/96	10.48	0.00	6.26	
	04/11/96	10.58	0.00	6.16	
	07/10/96	10.62	0.00	6.12	
	10/01/96	10,71	0.00	6.03	
	03/20/97	10.40	0.00	6.34	
经外面图表实际存储。	06/06/97	10.65	0.00	6.09	
	09/16/97	10.71	0.00	6.03	
	12/10/97	10.61	0.00	6.13	
	03/23/98	10,19	0.00	6.55	
	06/05/98	10.47	0.00	6.27	
	09/14/98	10.55	0.00	6.19	
	11/23/98	10.58	0.00	6.16	
	03/22/99	10.53	0.00	6.21	
	06/09/99	10.44	0.00	6.30	
	09/28/99	10.58	0.00	6.16	
	12/22/99	10.63	0.00	6.1.1	
	03/08/00	- 10.52	0.00	6.22	
	05/10/00	10.63	0.00	6.11	
	08/22/00	10.73	0.00	6.01	
	11/14/00	10,72	0.00	6.02	4
	02/06/01	10,47	0.00	6.27	4
	05/08/01		Not Measured		
	07/16/01	10,61	0.00		
	10/09/01	10.76	0.00	6.13	
	01/28/02	10.70	0.00	6.04	
	04/17/02		0.00		
	07/09/02	10.67	0.00	6.07	
	10/21/02	11.03	0.00	5.01	
	02/21/03	10.87	0.00	Compared the second of the sec	
过去的过去式和过去分词形式	05/08/03	11,04	0.00	5.87 5.70	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

ell Identification /		gantatiograph conditio	boks ang Pia Cota		vidi at sa ii
Surveyed Well				Groundwater	
Elevation 1	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)				microsida a la	
MW-10	07/25/03	11.02	0.00	5.72	4
16.59	11/21/03	11.16	0.00	5.43	1 7
cont'd	02/25/04	11.16	0.00	5.43	5
	06/21/04	11.21	0.00	5.38	J
ĺ	09/13/04	11.38	0.00	5.21	
	12/20/04	11.21	0.00	5.38	
•	03/07/05	10.48	0.00	6.11	
ĺ	05/16/05	10.94	0.00	5.65	·
ĺ	09/12/05	10.16	0.00	6.43	
1W-11	02/18/92	7.96	0.00	5.83	2
13.79	05/26/92	7.90	0.00	5.89	2
ai in thi i	07/30/92	8.04	0.00	5.75	2
	10/08/92	7.97	0.00	5.82	4
	01/14/93	8.78	0.00		
	01/14/93	7.45	0.00	5.01 6.34	
Bit Medianacia (p. Cardena) Sandatari Makazara (sahi	03/16/93				
		7.61	0.00	6.18	
in and the Period (1994). Thurston	04/14/93	7.78	0.00	6.01	
	05/10/93	7.85	0.00	5.94	15
	09/02/93	8 01	0.00	5.78	
3.57	06/29/94	7.52	0.00	6.05	3
	09/28/94	7.66	0.00	5.91	
	03/31/95	7.00	0.00	6.57	
	06/06/95	7,24	0.00	6.33	
	09/05/95	7.50	0.00	6.07	
	10/26/95	7.58	0.00	5.99	
readthaighaile.	01/29/96	7.44	0.00	6.13	
	04/11/96	7.58	0.00	5.99	
	07/10/96	7.57	0,00	6.00	
ing granding	10/01/96	7.68	0.00	5.89	
ju a Silva viede Türkiği a projekt Fransız Silva	03/20/97	7.38	0.00	6.19	
	06/06/97	7.63	0.00	5.94	
	09/16/97	7.71	0.00	5.86 Person	
	12/10/97	7.59	70.00	5.98	
	03/23/98	7.17	0.00	6,40	
1943 ŞŞANE VE	06/05/98	7,45	0.00	6.12	
	09/14/98	7.54	0.00	6.03	
	11/23/98	7.58	0.00	5.99	
	03/22/99	7.58 J. F. Lee	0,00	6.04	
	06/09/99	7.44	0.00	6.13	
g satismi (Sydbidi) Szidni Szidni (Sydbidi)	09/28/99	7,55	0.00	6.02	
	12/22/99	7.64		5.93	
	03/08/00	7.47	0.00	6.32	
	05/10/00	7.57	0.00	6.22	
	08/22/00	7.66	0.00	6.13	
24. (19.00 (M.SH) 75. (19.6)	11/14/00	7.74	0.00	6.05	4
	02/06/01	7.45	0.00	6.34	•
	05/08/01	7.42	0.00	6.37	
	07/16/01	7.57	0.00	6.22	
Clean a state 386 868	10/09/01	7.72	0.00	6.07	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

	13 17 3 3 3 3 3 3 3 3 3 3 3 3	Anco raciny	1		
Well Identification / Surveyed Well Elevation ¹ (Feet MSL)	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater Elevation ² (Feet MSL)	Source
MW-11	01/28/02	7.62	0.00	12 miles 20 23 miles 20 10 miles	Remark Agence
cont'd	04/17/02	· · · · · · · · · · · · · · · · · · ·	0.00	6.17	4
conra	07/09/02	7.55	0.00	6.24	
	10/21/02	7.65 7.96	0.00	6.14	
	02/21/03		0.00	5.83	
'	05/08/03	7.78	0.00	6.01	
·	07/25/03	7.87	0.00	5.92	
13.40	11/21/03	7.85 8.17	00,00	5.94	
10.40	02/25/04	7.95	0.00	5.23	
	06/21/04		0.00	5.45	5
	09/13/04	7.98	0.00	5.42	
	12/20/04	8.22	0.00	5.18	
		8.00	0.00	5.40	
	03/07/05	7.27	0.00	6.13	
	05/16/05	7.74	0.00	5.66	
a man handa kan kan kan di wasan sa sa sa	09/12/05	8.05	0.00	5.35	
MW-12	02/18/92	8.56	0.00	5.71	2
14,27	05/26/92	8.36	- 1-1-1-10.00 P 1-1-1	5.91	
	07/30/92	8.22	0.00	6.05	
	10/08/92	8.25	2 0.00	6.02	
	01/14/93	8.20	0.00	6.07	
	02/21/03	7.90	0.00	6.37	
	03/16/93	8.00	0.00	6.27	
	04/14/93	8.20	20.00 地方	6.07	
	05/10/93	7.15.	0.00	7,12	
	09/02/93	8.27	0.00	6.00	
	10/01/93		Well Destroyed		
MW-13	02/18/92	7.04	0.00	5.89	
12.93	05/26/92	7.04	0.00	5.89	
	07/30/92	6.77	0.00	6.16	
	10/08/92	6.77	0.00	6.16	
	01/14/93	6.85	0.00	6.08	
	02/21/03	6.51	0.00	6.42	
	03/16/93	6.62	0.00	6.31	
	04/14/93	6.75	0.00	6.18	
J	05/10/93	6.79	0.00	6.14	
	09/02/93	6.80	0.00	6.13	
	06/29/94	6.68	0.00	6.25	3
	09/28/94	6.90	0.00	6.03	
	03/31/95	6.12	0.00	6.81	
	06/06/95	6.51	0.00	6.42	
	09/05/95	6.75	0.00	6.18	
	10/26/95	6.82	0.00	6.11	
	01/29/96	6.69	0.00	6.24	
	04/11/96	6.84	0.00	6.09	
	07/10/96	6.83	0.00	6.10	
	10/01/96	6.91	0.00	6.02	
	03/20/97	6.73	0.00	6.20	
	06/06/97	6.82	0.00	6.11	
	09/16/97	6.84	0.00	6.09	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /					gagingi njija tini aj g
Surveyed Well	Date Measured			Groundwater	
Elevation 1	Date Weasured	Depth to Water (Feet)	LPH Inickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)					
MW-13	12/10/97	6.76	0.00	6.17	3
cont'd	03/23/98	6.42	0.00	6.51	
	06/05/98	6.66	0.00	6.27	
	09/14/98	6.75	0.00	6.18	
	11/23/98	6.77	0.00	6.16	
	03/22/99	6.69	0.00	6.24	
	06/09/99	6.65	0.00	6.28	
	09/28/99	6.74	0.00	6.19	
	12/22/99	6.79	0.00	6.14	
	03/08/00	6.72	0.00	6.21	
	05/10/00	6.85	0.00	6.08	
	08/22/00	6.95	0.00	5.98	
	11/14/00	6.94	0.00	5.99	4
	02/06/01	6.78	0.00	6.15	
	05/08/01	6.71	0.00	6.22	
	07/16/01	6.89	0.00	6.04	
,	10/09/01	7.00	0.00	5.93	
	01/28/02	6.97	0.00	5.96	
	04/17/02	6.95	0.00	5.98	
	07/09/02	6.97	0.00	5.96	
	10/21/02	7.37	0.00	5.56	
	02/21/03	7,28	0.00	5.65	
	05/08/03	7.36	0.00	5.57	
40.70	07/25/03	7.32	0.00	5.61	
12.79	11/21/03	7.63	0.00	5.16	
}	02/25/04	7.54	0.00	5.25	, 5
}	06/21/04	7.66	0.00	5.13	
}	09/13/04	7.67	0.00	5.12	
-	12/20/04	7.52	0.00	5.27	
}	03/07/05 05/16/05	6.96	0.00	5.83	
}	09/12/05	7.35	0.00	5.44	
MW-14	09/12/03	7.53	0.00 0.00	5.26	
14.59	05/26/92	8.68		5.88	2
	07/30/92	8.53	0.00	5.91	
	10/08/92	8.57	0.00	6.06	
us that in William Products	01/14/93	8.53	0.00	6.02 6.06	
Jak Sied vor Swifting 1985 von die er Parting	02/21/03	8.27	0.00	6.32	
	03/16/93	8.38	0.00	6.21	
	04/14/93	8.51	0.00		
	05/10/93	8.50	0.00	6.08	
	09/02/93	8.58	0.00	6.01	
	06/29/94	8.46	0.00	6.13	3
	09/28/94	8.71	0.00	5.88	3
	03/31/95	8.13	0.00	6.46	
	06/06/95		Well Not Gauged	na az feren u. u. au ur karan 1944 - An Tanah da da an 1984 - Tanah	
	09/05/95	8.51	1.0,00	6.08	
	10/26/95	8.61	0.00	5.98	
raumas varias dará seletido. 🕇	01/29/96	8.49	0.00	6.10	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /		S & ET Stocklope a control			skiplin and
Surveyed Well	Date Measured	Danis in Water (Feet)	LPH Thickness (Feet)	Groundwater	
Elevation ¹	Date Measureu	Depth to water (reet)	LPH Inickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)		The first man the grant			
MW-14	04/11/96	7.56	0.00	7.03	3
Cont'd	07/10/96	8.61	0.00	5.98	"
	10/01/96	8.68	0.00	5.91	ĺ
	03/20/97	8.41	0.00	6.18	
	06/06/97	8.60	0.00	5.99	
	09/16/97	8.66	0.00	5.93	
Ţ	12/10/97	8.58	0.00	6.01	
· [03/23/98	8.18	0.00	6.41	
	06/05/98	8.45	0.00	6.14	
	09/14/98	8.51	0.00	6.08	
	11/23/98	8.53	0.00	6.06	
1	03/22/99	8.46	0.00	6.13	
	06/09/99	8.46	0.00	6.13	
Ī	09/28/99	8.52	0.00	6,07	
	12/22/99	8.59	0.00	6.00	
Ţ	03/08/00	8.52	0.00	6.07	
	05/10/00	8.63	0.00	5.96	
	08/22/00	8.72	0.00	5.87	
	11/14/00	8.75	0.00	5.84	4
Ī	02/06/01	8.49	0.00	6.10	4
•	05/08/01	Not Measured			
Ī	07/16/01		Not Measured		
	10/09/01	8.21	0.00	6.38	
	01/28/02	8.14	0.00	6.45	
	04/17/02	8.73	0.00	5.86	
	07/09/02	8.72	0.00	5.87	
	10/21/02		Measured - Not Accessil		
	02/21/03	9.08	0.00	5.51	
	05/08/03	9.31	0.00	5.28	
	07/25/03	9.13	0.00	5.46	
14.62	11/21/03	9.31	0.00	5.31	
	02/25/04	9.31	0.00	5.31	5
	06/21/04	9.40	0.00	5.22	3
	09/13/04	9.47	0.00	5.15	
Ī	12/20/04	9.23	0.00	5.39	
	03/07/05	8.70	0.00	5.92	
<u></u>	05/16/05	6.08	0.00	8.54	
	09/12/05	9.26	0.00	5.36	
MW-15	02/18/92	5.93	0.00	5.74	2
11.67	05/26/92	6.12	0.00	5.55	2.
	07/30/92	6.31	Trace	5,36	
	10/08/92	6.44	0.22	5.40 ³	
	/ 01/14/93 ·	6.48	Trace	5.19	
	02/20/93	5.65	Trace	6.02	
	03/16/93	5.56	0,00	6.11	
	04/14/93	5.97	Trace	5.70	
	05/10/93	6.17	0.00		
				5.50	
nchistoral accept	09/02/93	6.33	0.00	5.34	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /						
Surveyed Well	Date Measured	Denth to Water (Feet)	LPH Thickness (Feet)	Groundwater	Source	
Elevation ¹				Elevation ² (Feet MSL)		
(Feet MSL)						
MW-15	09/28/94	5.77	0.00	5.90	3	
cont'd	03/31/95	5.64	0.00	6.03		
	06/06/95	5.99	0.00	5.68		
	09/05/95	8.51	0.00	6.08		
	10/26/95	8.61	0.00	5.98		
	01/29/96	8.49	0.00	6.10		
	04/11/96	7.56	0.00	7.03		
	07/10/96	8.61	0.00	5.98		
•	10/01/96	8.68	0.00	5.91		
	03/20/97	5.63	0.00	6.04		
·	06/06/97	6.37	0.00	5.30		
	09/16/97	6.16	0.00	5.51		
	12/10/97	5.61	0.00	6.06		
	03/23/98	5.52	0.00	6.15		
	06/05/98	5.87	0.00	5.80		
	09/14/98	6.07	0.00	5.60		
	11/23/98	6.14	0.00	5.53		
	03/22/99	5.98	0.00	5.69		
	06/09/99	5.82	0.00	5.85		
	09/28/99	6.01	0.00	· 5.66		
	12/22/99	6.23	0.00	5.44		
·	03/08/00	5.47	0.00	6.20		
	05/10/00	5.84	0.00	5.83		
	08/22/00	6.08	0.00	5.59		
	11/14/00	5.97	0.00	5.70	4	
	02/06/01	5.86	0.00	5.81		
	05/08/01	5.90	0.00	5.77	, ·	
	07/16/01	6.08	0.00	5.59	1	
	10/09/01	6.21	0.00	5.46	"	
	01/28/02	5.88	0.00	5.79		
	04/17/02	5.61	0.00	6.06	1	
	07/09/02	5.90	0.00	5.77	·	
	10/21/02	Not	Measured - Not Accessi	ble		
	02/21/03	Not	Measured - Not Accessi	ble		
	05/08/03	Not	Measured - Not Accessi	ble		
	07/25/03	Not	Measured - Not Accessi	ble		
11.30	11/21/03	7.05	Sheen	4.25		
	02/25/04	6.25	0.00	5.05	5	
	06/21/04	· 6.40	0.00	4.90		
	09/13/04	6.60	0.00	4.70		
	12/20/04	6.47	0.00	4.83		
	03/07/05	5.43	0.00	5.87		
	05/16/05	6.16	0.00	5.14		
	09/12/05	6.50	0.00	4.80		
MW-16	02/18/92	7,30	0.00	5.81	2	
13.11	05/26/92	7.90	0.00	5.21		
e propa sylvatore di pe	07/30/92	8,00	0,00	5.11		
	10/08/92	8.03	0.00	5.08		
	01/14/93	7,34	. J	5.77		

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /					eg el el alla tilli el Tel
Surveyed Well				Groundwater	
Elevation ¹	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)				Elevation (reet MSL)	
MW-16	02/20/93	7.17	0.00	5.94	2
cont'd	03/16/93	7.51	0.00	5.60	
	04/14/93	8.12	0.00	4.99	
	05/10/93	7.78	0.00	5.33	
	09/02/93	8.04	0.00	5.07	
	06/29/94	7.82	0.00	5.29	3
	09/28/94	8.18	0.00	4.93	J
	03/31/95	7.11	0.00	6.00	
•	06/06/95	7.71	0.00	5.40	
	09/05/95	8.02	0.00	5.09	
	10/26/95	8.08	0.00	5.03	
	01/29/96	7.73	0.00	5.38	
ſ	04/11/96	8.18	0.00	4.93	
	07/10/96	8.33	0.00	4.78	
	10/01/96	8.41	0.00	4.70	
Í	03/20/97	8.01	0.00	5.10	
	06/06/97	8.22	0.00	4.89	
	09/16/97	8.24	0.00	4.87	
Ĩ	12/10/97	8.13	0.00	4.98	• •
	03/23/98	7.73	0.00	5.38	
	06/05/98	8.05	0.00	5.06	
	09/14/98	8.19	0.00	4.92	
	11/23/98	8.26	0.00	4.85	
	03/22/99	8.15	0.00	4.96	
	06/09/99	7.84	0.00	5.27	
	09/28/99	8.12	0.00	4.99	
	12/22/99	8.44	0.00	4.67	
	03/08/00	7.81	0.00	5.30	•
	05/10/00	8.00	0.00	5.11	
	08/22/00	8.26	0.00	4.85	
	11/14/00	8.40	0.00	4.71	
	02/06/01	7.93	0.00	5.18	4
	05/08/01	8.08	0.00	5.03	
ļ*	07/16/01	8.30	0.00	4.81	
	10/09/01	8.35	0.00	4.76	
	01/28/02	7.92	0.00	5.19	
Ī	04/17/02	7.69	0.00	5.19	
	07/09/02	7.96	0.00		
	10/21/02	8.41	0.00	5.15	
1	02/21/03	7.91	0.00	4.70	
,	05/08/03	8.08	0.00	5.20	
.	07/25/03	8.01	0.00	5.03	
13.08	11/21/03	8.50	0.00	5.10	
<u> </u>	02/25/04	8.28	0.00	4.58	
<u> </u>	06/21/04	8.34	0.00	4.80	5
<u> </u>	09/13/04	8.56		4.74	
	12/20/04	8.48	0.00	4.52	
 	03/07/05	7.52	0.00	4.60	
<u> </u>	05/16/05	8.17		5.56	
-	09/12/05	8.52	0.00	4.91	
	99772700	0.02	0.00	4.56	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /				Frederical Control	
Surveyed Well	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater	Source
Elevation				Elevation ² (Feet MSL)	Source
(Feet MSL)					
MW-17	07/30/92	6.99	0.00	4.93	2
12.74	10/08/92	7.00	0.00	5.74	
	01/14/93	6.82	Trace	5.92	
ļ	02/20/93	6.48	Trace	,6.26	
ļ	03/16/93	6.64	Trace	6.10	
	04/14/93	6.75	Trace	5.99	
	05/10/93	6.89	Trace	5.85	
·	09/02/93	7.05	0.00	5.69	
15.18	06/29/94	9.13	0.00	6.05	3
	09/28/94	9.37	0.00	5.81	
	03/31/95	8.69	0.00	6.49	
	06/06/95	8.96	0.00	6.22	
	09/05/95	9.21	0.00	5.97	
	10/26/95	9.28	0.00	5.90	
	01/29/96	9.09	0.00	6.09	
	04/11/96	9.26	0.00	5.92	
	07/10/96	9.31	0.00	5.87	
	10/01/96	9.41	0.00	5,77	
	03/20/97	9.12	0.00	6.06	- 17
	06/06/97	9.35	0.00	5.83	
	09/16/97	9.42	0.00	5.76	
	12/10/97	9.31	0.00	5.87	
	03/23/98	8.89	0.00	6.29	
	06/05/98	9.18	0.00	6.00	
	09/14/98	9.26	0.00	5.92	
	11/23/98	9.31	0.00	5.87	
	03/22/99	9.25	0.00	5.93	•
	06/09/99	9.13	0.00	6.05	:
	09/28/99	9.27	0.00	5.91	
	12/22/99	9.36	0.00	5.82	
	03/08/00	9.14	0.00	3.60	4
Ī	05/10/00	9.28	0.00	3.46	7
	08/22/00	9.40	0.00	3.34	
	11/14/00	9.39	0.00	3.35	
	02/06/01	9.14	0.00	3.60	
[05/08/01	9.15	0.00	3.59	
Ī	07/16/01	9.29	0.00	3.45	
	10/09/01	9.44	0.00	3.30	
	01/28/02	9.30	0.00	3.44	
	04/17/02	9.21	0.00	3.53	
-	07/09/02	9.32	0.00	3.42	
<u> </u>	10/21/02	9.60	0.00	3.14	
}	02/21/03	9.39	0.00	3.35	
ř	05/08/03	9.57	0.00	3.33	
<u> </u>	07/25/03	9,43	0.00	3.31	
15.00	11/21/03	9.96	0.00	5.04	
	02/25/04	9.60	0.00	5.40	5
	06/21/04	9.70	0.00	5.30	5
	09/13/04	9.91	0.00	5.09	
	12/20/04	9.78	0.00	5.22	
-	03/07/05	8.96	0.00	6.04	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification / Surveyed Well Elevation ¹ (Feet MSL)	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater Elevation ² (Feet MSL)	Source
MW-17	05/16/05	9.48	0.00	5.52	5
cont'd	09/12/05	9.76	0.00	5.24	1
MW-18	07/30/92	8.34	0.00	5.41	2
13.75	10/08/92	8.45	0.00	5.30 ED = 5	
	01/14/93	7.81	0,00	5.94	
	02/20/93	7.60	0.00	6.15	
	03/16/93	7.82	0,00	5.93	
	04/14/93	8.57	0.00	5.18	
	05/10/93	8.62	0.00	5,13	
	09/02/93	8.95	0.00	4.80	
	- 06/29/94	8.77	0.00	4.98	3
	09/28/94	9.03	0.00	4.72	
	03/31/95	8.12	. 0.00	5.63	
	06/06/95	8.59	0.00	5.16	
	09/05/95	8.86	0.00	4.89	
	10/26/95	8.92	0.00	4.83	
	01/29/96	8,55	0.00	5.20	
	04/11/96	9.03	0.00	4.72	
TO THE PARTY OF THE PARTY.	07/10/96	9.17	0.00	4.58	
	- 10/01/96	9.25	0.00	4.50	
	03/20/97	7.82	0.00	5.93	
	06/06/97	9.08	0.00	4.67	
ar, all constitute da la color different. El tropi faja de la different distribut.	09/16/97	9.15	0.00	4.60	
	12/10/97	9.02	1 may 0.00 m	4.73	
	03/23/98	8.57	0.00	5.18	
	06/05/98	8.91	0.00	4.84	
	09/14/98	9.07	0.00	4.68	
	11/23/98	9.12	0.00	4.63	
	03/22/99	9.03	0.00	4.72	
	06/09/99	8.68	0.00	5.07	•
	09/28/99	9.04	0.00	4.71	
	12/22/99	9.32	0.00	4.43	
	03/08/00	8.69	0.00	5.06	
	05/10/00	8.85	0.00	4.90	
	08/22/00	9.13	0.00	4,62	
	11/14/00	9.18	0.00	4.57	4
	02/06/01	8.75	0.00	5.00	•
	05/08/01	8.91	0.00	4.84	
	07/16/01	9,16	0.00	4.59	
	10/09/01	9.26	0.00	4.49	
	01/28/02	8.73	0.00	5.02	
	04/17/02	8,55	0.00	5.20	
	07/09/02	8.85	0.00	4.90	
	10/21/02	9.24	0.00	4.51	
	02/21/03	8.74	0.00	5.01	
	05/08/03	8.91	0.00	4.84	
	07/25/03	8.78	0,00	4.97	
13.74	11/21/03	9.36	0.00	4.38	
	02/25/04	9.03	0.00	4.71	5
	06/21/04	9.18	0.00	4.56	J

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

	P	ARCO Facility	T		
Well Identification /					
Surveyed Well	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater	Source
Elevation ¹ (Feet MSL)				Elevation ² (Feet MSL)	
MW-18	09/13/04	9.37	0.00	4.37	5
cont'd	12/20/04	9.32	0.00	4.42	
50111 G	03/07/05	8.22	0.00	5.52	
	05/16/05	8.98	0.00	4.76	
	09/12/05	9.30	0.00	4.44	
MW-19A*	07/30/92	8.86	0.00	4.56	2
13.42	10/08/92	8.94	0.00	4.48	
	01/14/93	8.24	0.00	5.18	
	02/20/93	8.04	0.00	5.38	
	03/16/93	8.18	0.00	5.24	:
	04/14/93	8,09	0.00	5.33	
	05/10/93	8.16	0.00	5.26	
and Michiga to the nation of The out of the state of	09/02/93	8.48	0.00	4.94	
13,42	06/29/94	8.32	2 0.00 is a significant of the s	5.10	3
	09/28/94	8.57	0.00	4.85	
	03/31/95	7.70	0.00	5.72	
	06/06/95		Well Not Gauged		
	09/05/95	8.37	2 to 1 0.00 th start a	5.05	
uriori, sitti il lutoi pitua tambila giri Portografia Terra perpenditua est	10/26/95	8.45	0.00	4.97	
e euplice d'insert du la	- 3 01/29/96	8,10	0.00	5.32	
	04/11/96	7.50	0.00	5.92	
	07/10/96	8.62	0.00	4.80	
	10/01/96	8.73	0.00	4.69	
	03/20/97	8.30	0.00	5.12	
	06/06/97	8.60	0.00	4.82	
	09/16/97	8.70	0.00	4.72	
	12/10/97	8.53	0.00	4.89	
	03/23/98	8.04	0.00	5,38	
	06/05/98	8.36	0.00	5.06	
	09/14/98	8.55	0.00	4.87	
	11/23/98	8,60	0.00	4.82	
	03/22/99	8.50	0.00	4.92	
	06/09/99	8.19	0.00	5.23	<u> </u>
	09/28/99	8,52	0.00	4.90	
	12/22/99	8.78	0.00	4.64	
	03/08/00	8.23	0,00	5.19	. 3
	05/10/00	8.34	0.00	5,08	4
	08/22/00	8.62	0.00	4.80	
	11/14/00	8,62	0.00	4,80	
	02/06/01	8.21	0.00	5.21	
	05/08/01	8.37	0.00	5.05	
	07/16/01	8.60	0.00	4,82	
n (1,75 p. 1644), en (11,15 en 27 en (14,16 mai) et 15 e La la capación de la capación de la capación de la capación de la capación de la capación de la capación de la	10/09/01	8.75	0.00	4.67	
	01/28/02	8.27	0.00	5.15	
	04/17/02	8.08	0.00	5.34	
	07/09/02	8.35	0.00	5,07	
	10/21/02	8.68	0.00	4.74	
	02/21/03	8.24	0,00	5.18	
	05/08/03	8.39	0.00	5.03	
13.39	07/25/03 11/21/03	8.25 8.79	0.00	5.17 4.60	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /	esteri v Dorbet (sekalar Mala)	ing the constitution base of the residue to a first	remodel salade has ende		A. A. A. W. S. H. A. A.
Surveyed Well	n divini barah da kabupatèn iya. Baran da manarah da kabupatèn		通過性性 1955年 1955	Groundwater	
Elevation ¹	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)				Lievanon (reer wor)	
MW-19A*	02/25/04	8.45	0.00	4.94	5
cont'd	06/21/04	8.54	0.00	4.85	_
001111	09/13/04	8.91	0.00	4.48	
	12/20/04	8.76	0.00	4.63	
	03/07/05	7.76	0.00	5.63	1
	05/16/05	8.42	0.00	4.97	
	09/12/05	8.7.9	0.00	4.60	1
MW-19B	06/29/94		Data Not Reported		3
16,82	09/28/94		Data Not Reported		
	03/31/95	10.12	0.00	6.70	1
	06/06/95	10.33	0.00	6.49	1
	09/05/95	10.54	0.00	6.28	1
	10/26/95	10.66	0.00	6:16	,
	01/29/96	10.47	0.00	6.35	
	04/11/96	10.61	0.00	6.21	
	07/10/96	10,67	0.00	6.15	
	10/01/96	10.73	0.00	6,09	
	03/20/97	10.43	0.00	6.39	
	06/06/97	10.43	0.00	6.15	-7 4
	09/16/97	10.74	0.00	6.08	-
	12/10/97	10.67	0.00	6.15	-
	03/23/98	10.26	0.00	6.56	-
	06/05/98	10.51	0.00	6.31	
	09/14/98	10.60	0.00	6.22	1
	11/23/98	10.62	0.00	6.20	
			0.00	6.24	-
nt 10 fernig - Gerind of College (1994) - ger 19 - Alban Brath, 1994 - Land Brath, 1964 (1994)	03/22/99	10.58			
	06/09/99	10.53	0.00	6.29	
	09/28/99	10.62	0.00	6.20	-
eta, ferile Carollo Telepino poli 22. Postar de 1920 de fonda emilion	12/22/99	10.68	0.00	6.14	‡
er Belikanakere	03/08/00	10.57	0.00	6.25	1
	05/10/00	10.66	0.00	6,16	-
angalan Palan Waling Progress Palan Palan Alian Kengganan	08/22/00	10.78	0:00	6.04	
	11/14/00	10.76	0.00	6.06	4
	02/06/01	10.52	0.00	6.30	:
	05/08/01	10,50	0.00	6.32	
	07/16/01	10.47	10.00	6.35	
	10/09/01	10,81	0,00	6.01	
	01/28/02	10.76	0.00	6.06	
	04/17/02	10.74	0.00	6.08	
	07/09/02	10.78	0.00	6.04	
	10/21/02	11,14	0.00	5.68	
	02/21/03	10.99	0.00	5.83	1
	05/08/03	11.15	0.00	5.67	4
	07/25/03	11.08	0.00	5.74	
16,67	11/21/03	11.42	0.00	5.25	
	02/25/04	11.28	0.00	5.39	5
	06/21/04	11.36	0.00	5.31	1
	09/13/04	11.48	0.00	5.19	
	12/20/04	11.30	0.00	5.37	
2006年1月19日195日 - 1986年1月19日 - 1986年1月 1986年1月1日 - 1986年1月1日 - 1986年1日 03/07/05	10,62	0.00	6.05		

TABLE 3 SUMMARY OF STATIC WATER LEVEL ELEVATION DATA ARCO Facility #1919

Well Identification /	Libration Plant Charles	Anco racility		T 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Surveyed Well					
Elevation ¹	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater	Source
(Feet MSL)				Elevation ² (Feet MSL)	
MW-19B	05/16/05	11.03	0.00	5.64	
cont'd	09/12/05	11.18	0.00	5.49	5
MW-20	06/29/94	7.55	0.00	5.83	3
13.38	09/28/94	7.64	0.00	5.74	3
	03/31/95	7,82	0.00	5.56	
	06/06/95	7,06	0.00	6.32	
	09/05/95	7.29	0.00	6.09	•
	10/26/95	7.38	0.00	6.00	
	01/29/96	7.19	0.00	6.19	
	04/11/96	7.30	0.00	6.08	
	07/10/96	7.47	0.00	5.91	
	10/01/96	7.49	0.00	5.89	
	03/20/97	7.28	0.00	6,10	
	06/06/97	7.44	0.00	5.94	
	09/16/97	7.46	0.00	5.92	
	12/10/97	7.38	0.00	6.00	
	03/23/98	6.98	0.00	6.40	
	06/05/98	7.26	0.00	6.12	
	. 09/14/98	7.32	0.00	6.06	
	11/23/98	1 7.41	0.00	5.97	
	03/22/99	7.36	0,00	6.02	
	06/09/99	7.23	0.00	6.15	
	09/28/99	7.35	0.00	6.03	
	12/22/99	7.48	0.00	5.90	
通为证据的证据	03/08/00	7.23	0.00	6,15	
	05/10/00	7.45	0.00	5.93	
	08/22/00	7,50	0.00	5.88	
	11/14/00	7.59	0.00	5.79	4
	02/06/01	7.29	0.00	6.09	
	05/08/01	7.31	0.00	6.07	
	07/16/01	7.50	0,00	5.88	
	10/09/01	7.65	0.00	5.73	
	01/28/02	7.50	0.00	5.88	
	04/17/02	7.48	0.00	5.90	
	07/09/02	7.59	0.00	5.79	
	10/21/02	7.95	0.00	5.43	
	02/21/03	7.74	0.00	5.64	
	05/08/03	7.87	0.00	5.51	
	07/25/03	7,74	0.00	5.64	
.: 13.26 <u> </u>	11/21/03	37.5 8.35 × 41.0	0.00	4.91	
	02/25/04	8.12	.0.00	5.14	5
	06/21/04	8.15	0.00	5.11	J
	09/13/04	8.36	0.00	4.90	
	12/20/04	8.19	0.00	5.07	
	03/07/05	7.39	0.00	5.87	
Barring Ten	05/16/05	7.86	0,00	5,40	
	09/12/05	8.27	0.00	4.99	
MW-21	06/29/94	7.51	0.00	6.26	3
13.77	09/28/94	7.71	0.00	6.06	J
	03/31/95	7.12	0.00	6.65	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

Well Identification /					
Surveyed Well		Nach belate it Athan application and the	【新华山海海海市山油 建物工作 建工程设计	Groundwater	
Elevation ¹	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Elevation ² (Feet MSL)	Source
(Feet MSL)					
MW-21	06/06/95	7.31	0.00	6.46	3
cont'd	09/05/95	7.52	0.00	6.25	J
	10/26/95	7.52	0.00	6.25	
•	01/29/96	7.38	0.00	6.39	
	04/11/96	7.48	0.00	6.29	
	07/10/96	7.55	0.00	6.22	
	10/01/96		Data Not Reported	<u> </u>	
	03/20/97	7.34	0.00	6.43	
	06/06/97	7.55	0.00	6.22	
	09/16/97	7.60	0.00	6.17	
	12/10/97	7.51	0.00	6.26	
	03/23/98	7,13	0.00	6.64	
	06/05/98	, 7.40	0.00	6.37	
	09/14/98	7.46	0.00	6.31	
	11/23/98	7.48	0.00	6.29	
	03/22/99	7.41	0.00	6.36	
	06/09/99	7.39	0.00	6.38	
	09/28/99	7.47	0.00	6.30	
	12/22/99	7.53	0.00	6.24	•
	03/08/00	7.41	0.00	6.36	
	05/10/00	7.55	0.00	6.22	
	08/22/00	7.63	0.00	6.14	
	11/14/00	7.69	0.00	6.08	4
	02/06/01	7.41	0.00	6.36	
	05/08/01	7.37	0.00	6.40	
	07/16/01	7.53.	0.00	6.24	
	10/09/01	7.68	0.00	6.09	_
	01/28/02	7.63	0.00	6.14	•
	04/17/02	7.62	0.00	6.15	
	07/09/02	7.65	0.00	6.12	
	10/21/02	8.04	0.00	5.73	
	02/21/03	7.89	0.00	5.88	
	05/08/03	8.03	0.00	5.74	•
	07/25/03	8.00	0.00	5.77	
13.52	11/21/03	8.32	0.00	5.20	
	02/25/04	8.16	0.00	5.36	5
	06/21/04	8.28	0.00	5.24	
	09/13/04	8.40	0.00	5.12	
	12/20/04	8.20	0.00	5.32	
	03/07/05	7.52	0.00	6.00	
	05/16/05	7.83	0.00	5.69	
	09/12/05	8.16	0.00	5.36	
MW-22	07/25/00	5.50	0.00	4.31	. 3
9.81.	08/22/00	5.57	1 0.00 A 1 A 1	4.24	<u></u> .
on tarta, de Carle Ingritado de las el 1966. Nas Aprila de Carle Comercia de Carle Carle Ingris de la 1966.	11/14/00	5.56	0,00	4.25	4
	02/06/01	5.20	0.00	4.61	
	· · · · · 05/08/01	5.33	24 F A . 0.00	4.48	
	07/16/01	5.63	0.00	4.18	
	10/09/01	5.83	0.00	3.98	
	01/28/02	5.36	0.00	4.45	
	04/17/02	5.07	0.00	4.74	

TABLE 3
SUMMARY OF STATIC WATER LEVEL ELEVATION DATA
ARCO Facility #1919

07/09/02 10/21/02 02/21/03 05/08/03 07/25/03 11/21/03 02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01 07/16/01	5.24 5.55 5.27 5.25 5.05 5.65 5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.34 7.54 7.52 7.726 7.72	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	Groundwater Elevation ² (Feet MSL) 4.57 4.26 4.54 4.56 4.76 4.13 4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	Source 4 4
10/21/02 02/21/03 05/08/03 07/25/03 11/21/03 02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.55 5.27 5.25 5.05 5.65 5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	4.26 4.54 4.56 4.76 4.13 4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19	3
10/21/02 02/21/03 05/08/03 07/25/03 11/21/03 02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.55 5.27 5.25 5.05 5.65 5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	4.26 4.54 4.56 4.76 4.13 4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19	3
02/21/03 05/08/03 07/25/03 11/21/03 02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.27 5.25 5.05 5.65 5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	4.54 4.56 4.76 4.13 4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.91 4.58 5.19	3
05/08/03 07/25/03 11/21/03 02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.25 5.05 5.65 5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	4.56 4.76 4.13 4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	3
07/25/03 11/21/03 02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.05 5.65 5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	4.76 4.13 4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	3
11/21/03 02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.65 5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	4.13 4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	3
02/25/04 06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.49 5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	4.29 4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.91 4.58 5.19 4.93	3
06/21/04 09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.61 5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	4.17 3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	3
09/13/04 12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.91 5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	3.87 4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	
12/20/04 03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.77 4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00	4.01 5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	
03/07/05 05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	4.63 5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00 0.00	5.15 4.47 3.85 5.12 4.91 4.58 5.19 4.93	
05/16/05 09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01	5.31 5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00 0.00	4.47 3.85 5.12 4.91 4.58 5.19 4.93	
09/12/05 07/25/00 08/22/00 11/14/00 02/06/01 05/08/01 07/16/01	5.93 7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00	3.85 5.12 4.91 4.58 5.19 4.93	
07/25/00 08/22/00 11/14/00 02/06/01 05/08/01 07/16/01	7.33 7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00 0.00	5.12 4.91 4.58 5.19 4.93	
08/22/00 11/14/00 02/06/01 05/08/01 07/16/01	7.54 7.87 7.26 7.52 7.78	0.00 0.00 0.00 0.00	4.91 4.58 5.19 4.93	
11/14/00 02/06/01 05/08/01 07/16/01	7.87 7.26 7.52 7.78	0.00 0.00 0.00	4.58 5.19 4.93	4
02/06/01 05/08/01 07/16/01	7,26 7,52 7,78	0.00	5.19 4.93	4
05/08/01 07/16/01	7.52 7.78	0.00	4.93	
07/16/01	7.78	As a service of the s	1.02 to 2.21 to 3. Section 1.12. 1.2. 1.2. 1.2.	l •
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10/09/01	7 77	The second secon	4.67	
	The rest of the decoration of the contraction of th	- (人) (10 mm - 10 mm	P	
01/28/02	7.23	0.00	5.22	
04/17/02	6.99	0.00	5.46	
07/09/02	7,28	0.00	5.17	
10/21/02	7.80	0.00	4.65	
02/21/03	7.13	0.00	5.32	
05/08/03	7.44	0.00	5.01	-
all and the second of the seco	TO REPORT OF THE PARTY OF THE P	A STATE OF THE SECOND S	To a Margarity to the first transfer for a collection of the theory of the	
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09/13/04	7.99 · · ·	0,00	4.43	
12/20/04	7.94	0.00	4.48	
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05/16/05	7.49	0.00	4.93	
09/12/05	7.80	## O.00 Feb. 1	4.62	1
11/21/03	4.64	0.00	4.19	1
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09/12/05	4.76	and the second of the second o	4.07	
english in a grippings resolved in	l 3 2 3 3.21 1 4 4 4 4 5	0.00	4.00	
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TABLE 3

SUMMARY OF STATIC WATER LEVEL ELEVATION DATA ARCO Facility #1919

Well Identification / Surveyed Well Elevation ¹ (Feet MSL)	Date Measured	Depth to Water (Feet)	LPH Thickness (Feet)	Groundwater Elevation ² (Feet MSL)	Source
MW-25	06/21/04	No	ot Measured - Inaccessib	le	
cont'd	09/13/04	3.24	0.00	3.97	
	12/20/04	3.09	0.00	4.12	
	03/07/05	1.99	0.00	5.22	
	05/16/05	2.81	0.00	4.40	
	09/12/05	3.24	0.00	3.97	
MW-26	11/21/03	23.93	0.00	5.89	5
29.82	02/25/04	23.79	0.00	6.03	
	06/21/04	23.83	0.00 +	5.99	
	09/13/04	24.14	-0.00	5.68	
	12/20/04	23.93	0,00	5.89	
	03/07/05	23.19	0.00	6.63	
	05/16/05	23.61	0.00	6.21	
	09/12/05	23.91	0.00	5.91	

Notes:

- ¹ = Elevations are in feet above mean sea level (MSL).
- ² = Groundwater elevation in feet MSL = Surveyed Well Elevation Depth to Water
- ³ = Elevations adjusted by adding (0.75 x LPH thickness) to measured water elevations.

LPH = Liquid - Phase Hydrocarbons

- * Depth to groundwater measured including LPH thickness. LPH thickness was not reported by Alton Geoscience. Actual groundwater elevation not calculated by Alton Geoscience.
- ** MW-19 was renamed MW-19A after the installation of another MW-19 (now MW-19B).

Sources:

- 1 Alton Geoscience, 1992, Second Quarter 1992 Status Report on Fluid-Level Monitoring and Ground Water Sampling at ARCO Station 1919, 660 Via de la Valle, Solana Beach, California (Unauthorized Release No. T1985; Control No.H05166-002), dated July 21, 1992.
- 2 Alton Geoscience, 1994, Third Quarter 1993 Ground Water Monitoring and Sampling Report, ARCO Station 1919, 660 Via de la Valle, Solana Beach, California (Unauthorized Release No. T1985; Control No. H05166-002), dated January 19, 1994.
- 3 SECOR International incorporated, 2000, Site Assessment Report, ARCO Facility #1919, 660 Via de la Valle, Del Mar, CA, SAM Case # H05166, dated October 20, 2000.
- 4 SECOR International Incorporated, 2004, ARCO Quarterly Groundwater Remediation Report [Fourth-2003], dated January 30, 2004.
- **5** SECOR International Incorporated, 2005, ARCO Quarterly Groundwater Monitoring Report [Third-2005], dated October 15, 2005.

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В		i E	×	MTBE	Total Lead	Source
MW-1	10/10/90		N	lot Sampled - I	Measured LPI	l Thickness	<u> </u>		1
	12/19/91		N	lot Sampled - I	Measured LPI	H Thickness			
	02/18/92			lot Sampled - I					2
	05/26/92			lot Sampled - I					_
	07/30/92			lot Sampled - I					
	10/08/92			lot Sampled - I					
	01/14/93			lot Sampled - I					
	02/20/93			· · · · · · · · · · · · · · · · · · ·	pled - LPH SI				
	03/16/93				pled - LPH SI				
	04/14/93				pled - LPH SI				
	05/10/93			lot Sampled - I					
	09/02/93			lot Sampled - I					
	10/01/93		1/			THICKHESS			
MW-2		31,000	5,600		ell Destroyed	0.000	arverse are ear	e in the relation	
1 1177-4	10/10/90 12/19/91	31,000		1,600	1,000	2,000	Pagrip dy 4-1 de l arde ee 7 aantalaa		1
		CONTRACTOR OF THE		ot Sampled - I				Strik de Leise de la Colonia. La colonia de la Colonia d	
	02/18/92	ND	11,000	990	920	1,200		ND	2
yte or 24 le Hjugara Paleur au heta	05/26/92			ot Sampled - I			Tellië (10 k 1d pestië)	Grain, al	
	07/30/92			ot Sampled - I					
	10/08/92	25年,李镇民营	ribus Alban N	ot Sampled - I				e G. Li De swa	
	01/14/93				pled - LPH SI		ligal Sulaw		
	02/20/93		理論的概念等		ipled - LPH SI			Arthur Marine (1984) Experience (1984)	
nājā detra jūš	03/16/93				pled - LPH SI				
	04/14/93				pled - LPH S			5.数图中3.5g	
	05/10/93			Not Sam	pled - LPH SI	neen			
	09/02/93		(h. spříškí sa	Not Sam	pled - LPH Si	neen	Mercy (Pop. 1		
Protectors (Internal Co.	10/01/93		rskih Prikyrai	Public We	ell Destroyed	.南北泽东南部25	inappai ne n	proper	
MW-3	10/10/90	13,000	4,800	190	110	240		ND	1
	12/19/91	36,000	12,000	610	710	2,800		ND	
	02/18/92	54,000	8,100	210	440	1,500		ND	2
	05/26/92	9,575	2,391	556	667	2,751		ND	
	07/30/92	20,083	6,060.9	593	667.6	1,916.3			
	10/08/92	41,797	9,806.2	569.2	1,700.9	3,899.2			•
	01/14/93	32,200	9,500	288	812	4,486			
	02/20/93			Not Sa	mpled				
	03/16/93			Not Sa					
	04/14/93	89,000	4,700	140	330	750			
·	05/10/93	<u>-</u>	•	Not Sa					
ì	09/02/93	74,000	13,000	1,400	1,200	3,600	+-		
j	10/01/93	,			ell Destroyed	0,000		· · · · · · · · · · · · · · · · · · ·	
MW-4	10/10/90	ONIAN BONE	THE N	ot Sampled - I		1 Thickness	Virginia de la composición dela composición de la composición dela composición dela composición dela composición de la composición dela composición de la composición de la composición dela composición de		1
	12/19/91			of Sampled - 1					
rāvinist, et said	02/18/92			ot Sampled - I		1			2
	.05/26/92						parting a property of the	Sale Barra (Sale at 1) Salaman ere (1860a)	2
	07/30/92	THE STATE OF STATE	A CONTRACTOR AND AND AND AND AND AND AND AND AND AND	ot Sampled - N	vieasured LPF ipled - LPH SI		o alignos de la compansión de la compans	ales de la composition della c	
5.7.9 电平均移 电影 电影 电影影 医多种		attifug att to grant Her August 1995 -	regelestrander († 1872) 1. august - August († 1872)						
	10/08/92	Blanda Hurja			pled - LPH St pled - LPH St		et gegalekan bilan. Bilangan		
- 41. and 2012 (\$4. all of History we like the control History was a like the control	01/44/00	with the second times. The best harden that		THE RESERVE AND THE SECOND	miant - LDH Ch	ipen - in in	owan distribution distribution	orta-turiti Palicustidi.	
	01/14/93					The second secon	Capital Annual Commence of the	2000年2月2日 - 1887年 2008年2月2日 - 1887年	
	02/20/93			Not Sam	pled - LPH St	ieen			
		A section of the Charles and		Not Sam Not Sam		ieen ieen			

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	B	T	E 1 14	x -	MTBE	Total Lead	Source	
MW-4	05/10/93	men in verineering medi		N	ot Sampled	, recipios del accesso			2	
cont'd	09/02/93	33,000	900	1,100	1,900	7,300			1	
55. K G	10/01/93				ell Destroyed					
MW-5	10/10/90	15,000	1,700	3,000	110	1,200		ND	1	
	12/19/91	3. (S) 2. (ALC) 18. (A)			Measured LPH			gradice a não		
以下,基本中的 有	02/18/92		Contract to the contract to th		Measured LPH				2	
	05/26/92		Tripo and the second		Measured LPH		The second of the second			
	07/30/92				Measured LPH		ariude, zn			
Similar pitrista.	10/08/92				Measured LP			ar Ingelt (16, 17, in		
	01/14/93		contratt to the contrast of th		Measured LPI					
	02/20/93	per ret sweet sa	Publication state		npled - LPH Sh		Washiga			
	03/16/93				Measured LPF			in which the		
	04/14/93				Measured LPF			inds in		
	05/10/93	ar harryttig			Measured LPF		Met.			
	09/02/93				Measured LPH	the same of the sa	41. 15 m Latera	(Year 1991)		
	10/01/93		n to a bit Take 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to 10 to		ell Destroyed					
MW-6	10/10/90	4,000	920	340	40	330			1	
14144-0	12/19/91	ND	55	0.7	ND	45		ND	1	
	02/18/92	ND	430	76	68	140		ND	2	
	05/26/92	1,986	874	280	136.5	587			_	
	07/30/92	4,049	794.8	275.6	210.1	736			1	
	10/08/92	16,176	2,525.3	1,160.9	869.2	2,861.9			1	
	01/14/93	5,336	899.1	301.4	198.5	685.4			1	
	02/20/93	5,550	055.1		lot Sampled	000.1	<u> </u>	1	1 .	
	03/16/93	Not Sampled								
ı	04/14/93	9,800 730 130 140 440								
	05/10/93	9,000	730		lot Sampled	1770				
	09/02/93	6,100	1,200	76	27	1,200			1	
••	09/02/93	4,800	960	27	300	790			3	
		7,600	1,300	13	380	1,100			∤	
	09/28/94			38	510	1,300			1	
	03/31/95	7,000	2,100		Well Reduction	<u> </u>		<u> </u>	1	
	06/06/95				Well Reduction			 .	4	
	09/05/95	10,000			1,000				-	
	10/26/95	13,000	3,500						┨	
	01/30/96	22,000	4,600	25	940	1,600			-	
	04/11/96	3,200	850	14	150	200		<u> </u>	-	
	07/10/96				Well Reduction				-	
	10/01/96				Well Reduction		1 00 000 1		-	
	03/20/97 NP	17,000 ⁻	6,700	<60	1,500	680	29,000 1		4	
	06/06/97				- Well Reduction				-{	
	09/16/97				Well Reduction				-	
	12/10/97				- Well Reduction		40.000		4	
	03/23/98 NP	16,000	5,500	38	1,300	420	13,000		4	
	06/05/98				- Well Reduction	_			4	
	09/14/98				- Well Reduction				_	
	11/23/98				- Well Reduction		1	1	4	
	03/22/99 NP	15,000	4,100	<30	1,100	220	<1,000		4	
	06/09/99				- Well Reducti				_	
	09/28/99	Į.		Not Sampled	 Well Reduction 	on Program				

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	E	X	МТВЕ	Total Lead	Source				
MW-6	12/22/99			Not Sampled -	Well Reduction	n Program			3				
Cont'd	03/08/00 NP	5,900	2,300	<25	730	<75	850						
	05/10/00			Not Sampled -	Well Reduction	n Program							
	08/22/00		1	Not Sampled -	Well Reduction	n Program							
	11/14/00		1	Not Sampled -	Well Reduction	n Program			4				
	02/06/01 NP	<5,000	740	2.5	560	19	66						
	05/08/01		1	Not Sampled -	Well Reduction	n Program							
	07/16/01		1	Not Sampled -	Well Reduction	n Program							
	10/09/01			Vot Sampled -	Well Reduction	n Program							
	01/28/02 NP	1,400	110	0.52	96	2.2	150						
	04/17/02 NP	2,400	370	1.4	820	4.7	150						
	07/09/02		1	Not Sampled -	Well Reduction	n Program							
	10/21/02 ^{NP}	3,500	750	<5.0	630	<15	110						
,	02/21/03 ^{NP}	<500	0.56	<0.50	2.7	<1.5	62						
, [05/08/03		1	Not Sampled -	Well Reduction	n Program		' · · · · · · · · · · · · · · · · · · ·					
[07/25/03 NP	740	47	0.83	79	<1.5	120						
	11/21/03 NP	820	30	<0.50	32	<1.5	94						
	11/21/03	670	110	<0.50	140	<1.5	200						
Ī	02/25/04	670 110 <0.50 140 <1.5 200 <500											
	06/21/04	, '	Not Sampled - Well Reduction Program										
	09/13/04		Not Sampled - Well Reduction Program										
	12/20/04	Not Sampled - Well Reduction Program											
	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	3.5						
j	05/16/05		Not Sampled - Well Reduction Program										
Ţ	09/12/05				Well Reduction								
MW-7	10/10/90	38,000	11,000		3,400			2. ‡	1				
	12/19/91	Not Sampled - Measured LPH Thickness											
	02/18/92	Not Sampled - Measured LPH Thickness											
Tura Galai	05/26/92	Not Sampled - Measured LPH Thickness											
	07/30/92	Not Sampled - LPH Sheen											
	10/08/92	Not Sampled - LPH Sheen											
	01/14/93	Not Sampled - LPH Sheen											
	02/20/93	能注意。 1800年第1日 1800年	Not Sampled Measured LPH Thickness										
	03/16/93	L.T. day Muda v											
	04/14/93	FASTERIA F			Measured LPH			1815-70 L.T					
	05/10/93				Measured LPF		alia de propieta aind	The True of					
	09/02/93				pled - LPH Sh		i da Sena de Cara						
	10/01/93	graducija i j	4 4 Vene	HE W	ell Destroyed	esis və cəngqadə	ka (1,57 Janus Lay)						
MW-8	10/10/91		N		Measured LPH		The state of the second	The same of the property and a	1				
ľ	12/19/91				Measured LPH				•				
ľ	02/18/92				Measured LPF				2				
ţ	05/26/92				Measured LPH				_				
ľ	07/30/92				Measured LPF		<u> </u>						
T T	10/08/92				Measured LPH		 						
ľ	01/14/93				Measured LPF								
ļ	02/20/93				pled - LPH Sh								
<u> </u>	03/16/93				pled - LPH Sh								
1	04/14/93		N										
}	V4/14/93 1		Not Sampled - Measured LPH Thickness										
-			Not Sampled - Measured LPH Thickness										
	05/10/93 09/02/93		N	ot Sampled -		ł Thickness							

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well dentification	Sampling Date	GRO	В	T	F	X	MTBE	Total Lead	Source			
MW-10	02/18/92	ND	2.1	2.6	ND	0.8		ND	2			
	05/26/92	658	87	96	13	122		ND				
	07/30/92	ND	21	14.1	4.5	12.8	-	-+				
	10/08/92	1,969	137.3	165.2	47.8	314.1						
	01/14/93	ND	11.2	4	ND	7.5						
	02/21/03			N	lot Sampled		F					
	03/16/93			N	lot Sampled							
	04/14/93	270	8	9.1	ND	12						
	05/10/93			N	lot Sampled							
	09/02/93	230	21	23	3.4	45	·					
	06/29/94	ND	0.89	ND	0.71	ND			3			
•	09/28/94	<50	1	<0.50	0.53	<1.0						
•	03/31/95	450	1.3	0.95	0.48	1.5						
	06/06/95				Well Reduction	1		·				
	09/09/95				Well Reduction							
	10/26/95				Well Reduction							
	01/30/96	<500	<0.5	<0.5	<0.5	<1.5			İ			
	04/11/96	<500	<0.5	1.1	<0.5	<1.5			1			
	07/10/96	\\000			Well Reduction		1					
	10/01/96				Well Reduction				1			
	03/20/97 NP	<500	<0.5	<0.5	<0.5	<1.5	<10		1			
		2300			Well Reduction		<u> </u>	1	-			
	06/06/97				Well Reduction				1			
	09/16/97					_			}			
	12/10/97	F00			Well Reduction		-10	li .	1			
	03/23/98 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		-			
	06/05/98	<u> </u>			Well Reduction				-			
	09/14/98				Well Reduction				ł			
	11/23/98				Well Reduction		T	T	ļ			
	03/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10					
	06/09/99		Not Sampled - Well Reduction Program									
•	09/28/99		Not Sampled - Well Reduction Program									
	12/22/99	<u></u>	Not Sampled - Well Reduction Program									
	03/08/00 NP	<500	<0.50	<0.50	<0.50	<1.5	10]			
	05/10/00		Not Sampled - Well Reduction Program									
	08/22/00				Well Reduction							
	11/14/00			Not Sampled -	· Well Reduction	on Program		.,	4			
	02/06/01 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0					
	05/08/01			Not Sampled	Well Reduction	on Program			,			
	07/16/01			Not Sampled -	Well Reducti	on Program						
	10/09/01	" "		Not Sampled -	- Well Reducti	on Program]			
	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1			
	04/17/02 NP		<0.50	<0.50	<0.50	<1.5	<1.0		1			
	07/09/02				ction Program				1			
	10/21/02 NP	<500	<0.50	<0.50	<0.50	<1.50	<1.0		1			
	02/21/03 NP		<0.50	<0.50	<0.50	<1.5	1.1		1			
	05/08/03				- Well Reducti		1	<u> </u>	1			
	07/25/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1			
•	11/21/03 NP		<0.50	<0.50	<0.50	<1.5	<1.0		1			
						<1.5	<1.0		1			
	11/21/03 02/25/04	<500 <500	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50			 	5			
	. D. 27/20/01/01	. <5UU	ı <u.5u< td=""><td>1 <u.du< td=""><td>1 <u.du< td=""><td><1.5</td><td><1.0</td><td>1</td><td>1 2</td></u.du<></td></u.du<></td></u.5u<>	1 <u.du< td=""><td>1 <u.du< td=""><td><1.5</td><td><1.0</td><td>1</td><td>1 2</td></u.du<></td></u.du<>	1 <u.du< td=""><td><1.5</td><td><1.0</td><td>1</td><td>1 2</td></u.du<>	<1.5	<1.0	1	1 2			

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well dentification	Sampling Date	GRO	В	7	E	X	MTBE	Total Lead	Sourc
MW-10	09/13/04		<u> </u>	Not Sampled -	Well Reduction	n Program		1	5
cont'd	12/20/04		1	vot Sampled -	Well Reduction	n Program			
	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		
	05/16/05		1	Vot Sampled -	Weil Reduction	·		'-	1
	09/12/05				Well Reduction				
	02/18/92	ND ND	1919	ND 9	ND	ND	The property of the second	ND	2
	05/26/92	ND'	ND	ND	ND	ND		ND	
	07/30/92	ND :	ND	ND 1	ND	0.9	Supplied to the second		
	10/08/92	ND C	ND	ND	ND	ND			ĺ
	01/14/93	ND .	0.9	ND	ND	ND			1
	02/21/03	Ya Kasawata Ala	zastnike od na	1 2	lot Sampled	aEgyphilosom	al Sept Trans.		ĺ
Sparelling of the	03/16/93				lot Sampled ·		n all ville i bave a s Na 185 gy kravita i S		l
	04/14/93	210	ND	ND	ND	ND			ĺ
	05/10/93				lot Sampled				1
1012 2 5375 496 30	09/02/93	140	ND	ND '	ND	ND	avi de News dan Bankada (Es tan		ĺ
	06/29/94	60	1.2	₁ ND	ND	1.3	general services		3
	09/28/94	<50	<0.50	<0.50	<0.50	<1.0			ا
an skir	03/31/95	110	<0.3	<0.3	<0.3			10 No. 10 July	
No Every 4	06/06/95	<500	<0.5	<0.5	 	<0.6	The second of th		
	09/05/95	80			<0.5	<1.5	pi kaj teri kit uljuka Karansan da Mar	Maritania Maritania	
	10/26/95		<0.3	<0.3	<0.3	<0.6			
	THE RESERVE OF THE PARTY OF THE	<50	<0.5	<0.5	<0.5	<1.5			
	01/30/96	<500	<0.5	<0.5	. ,<0.5	<1.5	<u> </u>		
	04/11/96	<500	<0.5	<0.5	<0.5				
也有机 块 运了。	07/10/96	<50	<0.3	,<0.3	<0.3	<0.6	24		
	10/01/96	<500	<0.5	<0.5	<0.5	<1.5	24		
	03/20/97 NP	<500 ₩	<0.5	<0.5	<0.5	ત્ર ≮1.5			
	06/06/97 NP	<500	<0.5	0.5	<0,5	2	<10		
	09/16/97 NP	<50	<0.50	<0.50	<0.50	<1.5 ;	' ≤10		
	12/10/97 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		j
	03/23/98 NP	<500	<0.50	<0.50	<0.50	<1.5	'<10		ļ
	06/05/98 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<10	159 (6.44) y 14.	İ
	09/14/98 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	130	15 1 21 pr 1	I
	11/23/98	<50	<0.50	<0.50	<0.50	<1.0			
	03/22/99 NP	<500	:<0.50 hr	<0.50	<0.50	<1.5	<10		
	06/09/99 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<10		l
	09/28/99 ^{NP}	<500	<0.50	<0.50	<0.50	1.5 ×1.5	<10		
	12/22/99 ^{NP}	<500	∄ ∱ < 0.50	<0.50	<0.50	<1.5	<10		
	03/08/00 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<5.0 ¹		
	05/10/00 ^{NP}	<500 □	<0.50	<0.50	<0.50	<1.5	<1.0		
	08/22/00 ^{NP}	<500	. ≪0.50	<0.50	<0.50	<1.5	<1.0	47-40	
	11/14/00 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		4
	02/06/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	05/08/01 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	07/16/01 ^{NP}		<0.50	<0.50	<0.50	<1.5	<1.0		
ra den er er er er. Generalisa	10/09/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0	i de la compania de la compania de la compania de la compania de la compania de la compania de la compania de La compania de la compania de la compania de la compania de la compania de la compania de la compania de la co	¦
	01/28/02 NP	<500 <500	<0.50 <0.50	<0.50	<0.50	√1.5 <1.5	<1.0	i nen vartti i davi Dikkologija kasi et	ł
	04/17/02 NP	<500	<0.50	<0.50 <0.50	<0.50	<1.5 <1.5	<1.0 <1.0		
	07/09/02		and a contract of the contract		Well Reduction		o SiuUsiii	i applica 75 00 (1996) proposition of the final	
李统统法 李	10/21/02 ^{NP}	<500	<0.50	vot Sampieu - <0.50 □			rantining and a second	or 1651, r. barri Massacri 1946 di	
	02/21/03 NP			22.00.20.00.00	<0.50	<1.5	<1.0		
as dinchaents all	02/21/03	<500	<0.50	<0.50	<0.50 Well Reduction	<1.5	<1.0		

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В		. .	X	MTBE	Total Lead	Source
MW-11	07/25/03 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		4
cont'd	11/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	11/21/03	<500 .	<0.50	<0.50	<0.50	<1.5	<1.0		
	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	<1.0		5
	06/21/04			1	Well Reduction		I	.1	
	09/13/04				Well Reduction				
	12/20/04				Well Reduction				
	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		
	05/16/05	· · · · · · · · · · · · · · · · · · ·			Well Reduction		!		
	09/12/05				Well Reduction	 		•	
MW-12	02/18/92	19,000	1,900	3,200	2,100	11,000	Agriculture (1)	. 28	2
	05/26/92	56,001	4,680	8,460	3,540	18,540		acar laber.	
	07/30/92	42,893	2,709	4,673	3,696.5	21,516			
	10/08/92	113,077	4,724	7,262	6,343.9	23,142.1			
	01/14/93	94,962	3,463	6,161	3,397	17,783	TANGALIN AND THE CONTROL OF THE CONT	September 1	
	02/21/03				ot Sampled	Art Pro 相談研究 (中立) Art Property (中部) Property (中部) Property (中部) Property (中部)	process with the retrieval for a region with the region of the state of the projection of the state	apartenan arawa (1974) Apartenan arawa (1974) Apartenan arawa (1974)	
	03/16/93	Barri 100 sec	ar jang belah seliki		ot Sampled	At a Mark Mark Mark		er er en van	
	04/14/93	48,000	2,500	3,500	1,600	7,500		The State of the S	
	05/10/93	0,000			ot Sampled		Marcellan Cherry Trans		
	09/02/93	54,000	4,100	5,500	2,500	13,000	14 3 5 1 2 6		
	10/01/93				ell Destroyed		Transistance 2 5 	16141 - 1417 P. :	
MW-13	02/18/92	ND	ND	0.5	ND	ND	14) iyo ingeleje (Alborigo) 	ND	
10104-10	05/26/92	ND ND	ND ND	ND	ND	ND			
	07/30/92	ND	ND ND	ND	ND	ND			
	10/08/92	ND	4	8.6	14.5	21.7	·		
	01/14/93	ND	ND	1.2	ND	ND			
	02/21/03	IND	CIVID		lot Sampled	I ND		<u></u>	{
	03/16/93				lot Sampled				ł
	03/10/93	ND	ND	. ND	ND	ND			.
	05/10/93	ואט	I IVD		lot Sampled	I ND	1	<u> </u>	1
!	09/02/93	ND	ND	ND IN	ND	ND	T	T	
							+-	 	
	06/29/94	ND	ND 0.50	ND 0.50	ND 0.50	ND			3
	09/28/94	<50	<0.50	<0.50	<0.50	<1.0		<u></u>	
	03/31/95	59	<0.3	<0.3	<0.3	<0.6			
	06/06/95				Well Reduction				
	09/05/95				Well Reduction				
	10/26/95				Well Reduction	_	τ	- 	
	01/30/96	<500	<0,5	<0.5	<0.5	<1.5	<u></u>]
	04/11/96				Well Reduction	· •			
	07/10/96				Well Reduction				
	10/01/96				Well Reduction		1	,	
	03/20/97 NP	<500	<0.5	<0.5	<0.5	<1.5	<10		
	06/06/97				Well Reduction				
	09/16/97	ļ			Well Reduction				[
	12/10/97				Well Reduction		,		
	03/23/98 NP	<500	<0.50	<0.50	<0.50	<1.5	<10	<u> </u>	
	06/05/98				Well Reduction]
	09/14/98				Well Reduction				
	11/23/98				Well Reduction				
	03/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		
	06/09/99			Not Sampled -	Well Reduction	on Program			1

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	n - T	E	X	MTBE	Total Lead	Source
MW-13	09/28/99		<u> </u>	Not Sampled -	Well Reduction	n Program	In the state of the same		3
cont'd	12/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10	I	
	03/08/00 NP	<500	<0.50	<0.50	<0.50	<1.5	<5.0 1		1
	05/10/00 NP	<500	<0.50	<0.50	<0.50	<1.5	2.8		1
	08/22/00 NP	<500	<0.50	<0.50	<0.50	<1.5	39		
	11/14/00 NP	<500	<0.50	0.54	<0.50	<1.5	2		4
	02/06/01 NP	<500	<0.50	<0.50	<0.50	<1,5	4		•
	05/08/01 NP	<500	<0.50	<0.50	<0.50	<1.5	7		
	07/16/01 NP	<500	<0.50	<0.50	<0.50	<1.5	33		
	10/09/01 NP	<500	<0.50	<0.50	<0.50	<1.5	22		1
	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	1.1		
	04/17/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		Í
	07/09/02 NP				Well Reduction				
	10/21/02 NP	<500	<0.50	<0.50	<0.50	<1.5	1.8		
	02/21/03 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1
	05/08/03				Well Reduction		11.0		1
	07/25/03				Well Reduction				1
	11/21/03 NP	<500	< 0.50	<0.50	<0.50	<1.5	<1.0	T	
	11/21/03	<500	<0.50	<0.50	<0.50	<1.5	18		
	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	17		5
	06/21/04				Reduction Pro		17	<u> </u>	
	09/13/04				Reduction Pro		 .	·	
	12/20/04				Reduction Pro				
	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	9.3	1	
	05/16/05		- 1		Well Reduction				
	09/12/05				Well Reduction		 .		
MW-14	02/18/92	ND	ND	ND	ND.	(ND		ND 5	2
	05/26/92	ND .	ND.	ND	ND	ND	<u>(j. 1. f. rel</u> 1926 (j. j. 1936 - Janes Janes (j. j. j. j. j. j. j. j. j. j. j. j. j. j	Part IND	-
	07/30/92	ND -	ND -	K ND	ND	0.9			
	10/08/92	ND	ND .	ND	ND	ND.	7. E		
	01/14/93	ND	/ v. 1.3	ND ·	ND	ND -	Level Full Committee Commi		
	02/21/03	TAX PERSON			ot Sampled				
	. 03/16/93		Talgradi — Care e peranda III. A 1985 a Marian III. A 1997 k		ot Sampled	and the policy of the longer that the policy of the first		aleganski matat Sezavataja el	
rad 1649 - 1770 - 1771 15 - Sarak 1765 - 1766	04/14/93	ND .	ND -		+ ND	ND		shahada in san	
3.43万多克克	05/10/93				ot Sampled			Horata, PR 90 (1) Gui, Guidelia (1)	
241.19 (95)[75][24] (1446) 26.46 (146)[47] (146)	09/02/93	ND	ND- :	ND .	ND	ND	Maria di 1905 di Maria di 1905 di 1905 di 1905 di 1905 di 1905 di 1905 di 1905 di 1905 di 1905 di 1905 di 1905 di 1905 di 1905	a jedna do Stadija ze na Povijeno z Septembroja	
	06/29/94	n ND	D W	· ND	" ND	ND:			3
y in Alexander	09/28/94	<50	<0,50	<0.50	<0.50	<1.0	TENER PROPERTY SERVICE		3
	03/31/95	. 59	<0.3	<0.3	<0.3	√,.6			
	06/06/95				Well Reductio				
	09/05/95				Well Reductio			ta divinizione di Della calculata	
	10/26/95				Well Reductio		<u>12 jakon 10-tali g</u> Gelegaria	og kaj di Nejvir. Produktara	
	01/30/96	<500	<0.5	<0.5	<0,5	:: : : : : : : : : : : : : : : : : : :		290 - 250 - 160 -	
e transfer of 19 At	04/11/96		4.4-2		Well Reductio			10 565 - 5 14 140	
a programme to the control of the co	07/10/96	The same of the sa			Well Reductio		na citro di Alexandria (c.). Principale di Santa (d.).	ama (Alada) (本) 24 Maio (Alada)	
	10/01/96	· 1 www.ersowia			Well Reductio			r en Krijblyddir Y Geryd, refa ska	
	03/20/97 NP	<500	∴ <0.5	<0.5	vve⊪ neduciio <0.5	ir ⊨iogram 		e partualistici (18. Programa 18. aprilis 18. aprilis 18. aprilis 18. aprilis 18. aprilis 18. aprilis 18. aprilis 18. aprilis 18. a	
	06/06/97				Ko.a Well Reductio				
audit igili haka dilagi i kabadari Nijirab ∎i		er own at the final and the second	sazerji i u byj umitriliyojila i "TN				registration of the state of th	Jan Kar	
	09/16/97		idalə "Səri Cəziləti" 📉	of Sampled	Well Dadricks	n Dronrow	Mary Artist Get 14	and the state of t	
	09/16/97 12/10/97				Well Reductio Well Reductio				

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T 11	E	X	MTBE	Total Lead	Source				
MW-14	06/05/98			Vot Sampled -	Well Reduction	n Program			3				
cont'd	09/14/98			Vot Sampled -	Well Reduction	on Program							
	11/23/98		l	Not Sampled -	Well Reduction	n Program							
	03/22/99 NP	<500	< 0.50	<0.50	<0.50	<1.5	<10						
İ	06/09/99			Not Sampled -	Well Reduction	n Program	<u>'</u>						
	09/28/99			Not Sampled -									
	12/22/99			Not Sampled -									
	03/08/00 NP	<500	<0.50	<0.50	<0.50	<1.5	<5.0 ¹						
	05/10/00			Not Sampled -	Well Reduction	n Program	\						
	08/22/00			Not Sampled -	Well Reduction	on Program							
4	11/14/00			Not Sampled -					4				
	02/06/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		_				
	05/08/01			Not Sampled -									
	07/16/01			Not Sampled -			· · · · ·						
	10/09/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
ľ	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
	04/17/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
	07/09/02	1000		Not Sampled -	<u>. </u>	<u> </u>	1						
	10/21/02			Not Sampled -		 	•						
ŀ	02/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
ŀ	05/08/03			Not Sampled -			<u> </u>						
ŀ	07/25/03			Not Sampled -									
ŀ	11/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
	11/21/03	<500	<0.50	<0.50	<0.50								
ŀ	02/25/04	<500 <500	<0.50	<0.50	<0.50	<1.5 <1.5	<1.0						
	06/21/04	. <300				L.,	2.0		5				
}	09/13/04		Not Sampled - Well Reduction Program Not Sampled - Well Reduction Program										
•	12/20/04												
}		-100		Not Sampled - <2.0		, <u></u>		· · · · · · · · · · · · · · · · · · ·					
}	03/07/05	<100	<0.50		<0.50	<1.0	<1.0						
-	05/16/05	100		Not Sampled -				•					
	09/13/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0						
MW-15	02/18/92	8.000	1,800	5,400	850	5,000	4.74-46	ND	2				
	05/26/92	2,649	2,091	2,736	876	3,476							
	07/30/92	Acquiring States (Section 2017)	2.615.713.500		l Not Sampled	and the second of the second o		re Lagran (striker)					
	10/08/92				l Not Sampled			94.447.43.					
	01/14/93				l Not Sampled								
	02/20/93		e antological	1 01 12 1	l Not Sampled								
	03/16/93				l Not Sampled								
uto a programa	04/14/93			4	l Not Sampled	the first of the f							
	05/10/93		and struct Englishing		Not Sampled		id bridh						
	09/02/93	120,000	10,000	6,200	1,700	5,300							
	06/29/94	53,000	8,000	180	1,400	600			3				
	09/28/94	13,0000	5,500	11,000	7,000	24,000							
	03/31/95	65,000	10,000	360	1,100	680		i (Casa de Septembri)					
	06/06/95	we in person	, Villaga (1	Not Sampled -	Well Reduction	on Program 📶		Howies (Lee.)					
	09/05/95	SALES A CONTRACTOR		Not Sampled -	Well Reduction	n Program	e I jiron baya	NGGV96					
	10/26/95	29,000	12,000	420	1,400	480 -							
	01/30/96	76,000	6,200	92	290	120							
	04/11/96	24,000	11,000	96	510	1777190 if i	2450-264	10.75 to 10.					
	07/10/96	ASTRACTES.		Not Sampled -									
	10/01/96				Well Reduction			Francisco					

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В		E	X	MTBE	Total Lead	Source
MW-15	03/20/97 ^{NP}	25,000	12,000	740	1,100	1,400	210,000 1		3
cont'd	06/06/97		1	Not Sampled -	Well Reduction	n Program			
	09/16/97		1	Not Sampled -	Well Reduction	n Program			
	12/10/97	}	1	Not Sampled -	Well Reduction	n Program			
	03/23/98 NP	6200	2500	150	480	260	32,000		
	06/05/98	·	1	vot Sampled -	Well Reduction	n Program		•	
	09/14/98		1	Not Sampled -	Well Reduction	n Program			
	11/23/98		1	vot Sampled -	Well Reduction	n Program			
	03/22/99 NP	22000	7600	<60	760	160	180,000		
	06/09/99		1	vot Sampled -	Well Reduction	n Program		<u> </u>	
,	09/28/99	2,7000	11,000	120	1,400	1,200	52,000 1		
·	12/22/99 NP	12,000	4,100	<60	440	440	32,000		
	03/08/00 NP	<500	72	<1.0	27	3.8	200		
	05/10/00 NP	23,000	7,700	<100	780	<300	45,000	;-	
	08/22/00 ^{NP}	23,000	14,000	<130	2,000	<380	46,000	· ·	!
	11/14/00 NP	10,000	6,900	350	1,000	420	18,000		4
	02/06/01 NP	3,100	1,100	<50	190	<150	15,000		7
	05/08/01 NP	19,000	10,000	82	1,700	300	20,000		
	03/08/01 07/16/01 NP	20,000	11,000	71	1,900	390	18,000		-
	10/09/01 NP			<250	1,800	<750	<u> </u>	:	
	01/28/02 NP	24,000	12,000				17,000		
	01/20/02 04/47/00 NP		1,300	<62	390	<190	24,000		
	04/17/02 NP	1,700	540	<100	180	<300	7,400		
	07/09/02		Г		Well Reduction				
·	10/21/02				d - Well Not A				
	02/21/03				d - Well Not Ad				
	05/08/03				d - Well Not Ad				
	07/25/03	<u></u>			d - Well Not Ad		=		
j	11/21/03			,	npled - LPH SI		,		,
	02/25/04	2,400	910	<200	<200	<600	51,000		5
·	06/21/04				Well Reduction				
	09/13/04		<u> </u>	Not Sampled -	Well Reduction	on Program			
	12/20/04			Not Sampled -	Well Reduction	on Program			
	03/08/05				zed - Suspect S				
	05/16/05		1	Not Sampled -	Well Reduction	on Program			
	09/13/05	9,200	1,700	<100	170	<200	16,000		
MW-16	02/18/92	- ND	. ND	0.6	ND	ND	TOWER OF	ND	2
极级数据数据	05/26/92	ND.	12.5	- DD	ND .	ND.			
	07/30/92	ND-	0.6	0.9	ND	- ND			
	10/08/92	ND	35.8	2.5	ND	ND		d (%) -43/3	
	01/14/93	' ND	51.6	1.2	ND	ND 1			
	02/20/93	. Visi service e ro			lot Sampled				
	03/16/93				lot Sampled			Table Carbon	
	04/14/93	1000	22	ND 5	ND	ND		CONTRACTOR	
res Str. Skiller for Kirl	05/10/93				lot Sampled				
	09/02/93	7,100	160	ND	ot Sampled ND	ND .	a Harristanist etili. Priji (jagb+£, år	og sagar ajjetekiji pid Indjir gali Zasa Zasa	
	09/02/93	7,100 - 13,000		1,600	270	830		i des l'apprese. Transfera	3
			2,800					3.1	
	09/28/94	38,000 39,000	5,900	<50 <30	200	130			
				4 4 4 1	uur	120	化物物金光杨	prove programation of	Į.
	03/31/95	39,000	5,500				a g ancia da Arbardan antar de como. Oscilio glima gigoropia (il bilanta di Stario	■ Constant (特別の と、Constant (period)。	Į.
	03/31/95 06/06/95 09/05/95	39,000		Vot Sampled	Well Reduction	on Program			

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well dentification	Sampling Date	GRO	В	T	u	X	MTBE	Total Lead	Source							
MW-16	01/30/96	25,000	1,700	5.9	110	5.6		**	3							
cont'd	04/11/96			Not Sampled -	Well Reduction	n Program										
	07/10/96				Well Reduction											
	10/01/96			Not Sampled -	Well Reduction	n Program										
	03/20/97 ^{NP}	<500	24	<0.5	1.3	<1.5	45,000 1									
	06/06/97			Not Sampled -	Well Reduction	n Program		' -								
	09/16/97			Not Sampled -	Well Reduction	n Program										
	12/10/97 NP	1,100	320	<12	<12	<24	19,000									
	03/23/98 NP	<500	110	<0.50	1.5	2.8	19,000									
	06/05/98 ^{NP}	<500	20	<0.50	<0.50	<1.5	19,000									
[09/14/98 ^{NP}	170	14	<0.50	<0.50	<1.5	23,000									
	11/23/98 ^{NP}	<500	<5	<5	<5	<10	20,000									
	03/22/99 NP	<500	1.2	1.1	<0.50	<1.5	20,000									
	06/09/99 NP	<500	8.9	<0.50	<0.50	<1.5	12,000 -1									
	09/28/99 NP	<500	9.3	<1.2	<1.2	<2.4	10,000		ĺ							
ļ	12/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	9,100									
	03/08/00 NP	2,600	2.3	<1.5	2.1	5.2	11,000									
]	05/10/00 NP	4,600	26	<10	<10	<30	14,000		ĺ							
Ī	08/22/00 NP	<500	<40	<40	<40	<120	9,000		·							
Ì	11/14/00 NP	<1,000	<40	<40	<40	<120	9,400		4							
İ	02/06/01 NF	<1,000	<40	<40	<40	<120	13,000		7							
<u> </u>	05/08/01 NP	<500	<25	<25	<25	<75	10,000									
ŀ	07/16/01 NP	<500	<40	<40	<40	<120	9,300									
ŀ	10/09/01 NF	<500 <500	<100	<100	<100	<300	9,000									
-	01/28/02 NP	<500	<40	<40	<40	<120	7,000									
-	04/17/02 ^{NP}	<500	<50	<50	< 4 0	<120	5,000									
-	07/09/02				Well Reduction		5,000									
-	10/21/02 NP	<500	<50				7.000									
-	02/21/03 ^{NP}	<500	<50 <50	<50 <50	<50 <50	<150	7,200									
}	05/08/03	<500		<u> </u>		<150	5,600									
-	05/06/03				Well Reduction				┥							
}	11/21/03 NP	500		1	Well Reduction				'							
<u> </u>		<500	<25	<25	<25	<75	6,300									
-	11/21/03	<500	<50	<50	<50	<150	6,000									
ļ.	02/25/04	<500	<50	<50	<50	<150	5,900		5							
ļ.	06/21/04				Well Reduction											
ļ	09/13/04				Well Reduction											
	12/20/04				Well Reduction											
	03/08/05				ed - Suspect S											
	05/16/05	<u></u>		· · · · · · · · · · · · · · · · · · ·	Well Reduction											
	09/12/05				Well Reduction	n Program										
MW-17	07/30/92	1,570	169.5	253.3	54.1	321.3		ND	2							
	10/08/92	20,834	3,083.5	3,086.8	785.2	2,623.5										
	01/14/93	3. 经国际债券		Wel	I Not Sampled	b. T. F. F. H. S. F.	Parting P									
	02/20/93			Wel	l Not Sampled		Talle of Children and Telephon Sepperation of C									
	03/16/93		alde, Post te		l Not Sampled	an an angkari		árá projek P								
	04/14/93			. We	l Not Sampled	Committee of the commit										
	05/10/93			The second secon	l Not Sampled											
	09/02/93	7,600	1,200	1,200	160	810	in a plant of the latest	i anadia - na ana								
	06/29/94	13,000	2,800	1,600	270	830			3							
	09/28/94	13,000	1,900	1,700	260	1,000										
	03/31/95	7,700	1,600	120		170		tore of two regions. - Series = 100 trans								

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

/10/90 /19/91 /18/92 /26/92 /30/92 /08/92 /14/93 /20/93 /14/93 /10/93 /10/90 /19/91 /18/92 /26/92 /30/92 /14/93 /20/93 /14/93 /20/93 /14/93 /20/93 /14/93	31,000 ND	N N N N N N N N N N N N N N N N N N N	lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - Not Sam Not Sam Not Sam lot Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPH Measured LPH Measured LPH Measured LPH Measured LPH Measured LPH Measured LPH Stropled - LPH Stropled - LPH Stropled - LPH Measured LPH Measured LPH Measured LPH ell Destroyed	I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness		To the second se	1 2					
/18/92 //26/92 //30/92 //30/92 //14/93 //16/93 //10/93 //10/93 //10/90 //19/91 //18/92 //26/92 //30/92 //14/93 //16/93		N N N N N N N N N N N N N N N N N N N	lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - Not Sar Not Sar Not Sar lot Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPH Measured LPH Measured LPH Measured LPH Measured LPH npled - LPH Sh npled - LPH Sh npled - LPH Sh Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH	Thickness Thickness Thickness Thickness Thickness Thickness Thickness Thickness Thickness Thickness Thickness Thickness			1					
/26/92 /30/92 /08/92 /14/93 /16/93 /16/93 /10/93 /01/93 /10/90 /19/91 /18/92 /26/92 /08/92 /14/93 /16/93		N N N N N S,600	lot Sampled - lot Sampled - lot Sampled - lot Sampled - Not Sar Not Sar Not Sar lot Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPH Measured LPH Measured LPH Measured LPH npled - LPH Sh npled - LPH Sh npled - LPH Sh Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH	I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness			1					
/30/92 /08/92 /14/93 /20/93 /16/93 /10/93 /01/93 /01/93 /10/90 /19/91 /18/92 /26/92 /08/92 /14/93 /20/93 /16/93		N N N N N 11,000	lot Sampled - lot Sampled - Not Sam Not Sam Not Sam Not Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPH Measured LPH Measured LPH npled - LPH Sh npled - LPH Sh Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH Measured LPH	I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness			1					
/08/92 /14/93 /20/93 /16/93 /14/93 /10/93 /01/93 /10/90 /19/91 /18/92 /26/92 /08/92 /14/93 /20/93 /16/93		N N N N 5,600	lot Sampled - Not Sar Not Sar Not Sar lot Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPH Measured LPH npled - LPH Sh npled - LPH Sh npled - LPH Sh Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH Measured LPH 920 Measured LPH	I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness I Thickness								
/14/93 /20/93 /16/93 /14/93 /10/93 /01/93 /01/93 /10/90 /19/91 /18/92 /26/92 /08/92 /14/93 /20/93 /16/93		5,600 N 11,000 N	lot Sampled - Not Sar Not Sar Not Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPH npled - LPH Sh npled - LPH Sh npled - LPH Sh npled - LPH Sh Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH Measured LPH	I Thickness neen neen I Thickness I Thickness I Thickness 1 Thickness 1 Thickness								
/20/93 /16/93 /14/93 /10/93 /02/93 /01/93 /10/90 /19/91 /18/92 /26/92 /30/92 /08/92 /14/93 /16/93		5,600 N 11,000 N	Not Sar Not Sar Not Sar lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	npled - LPH St npled - LPH St npled - LPH St Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH	leen leen I Thickness I Thickness I Thickness 1 Thickness 1 Thickness 1,200								
/16/93 /14/93 /10/93 /02/93 /01/93 /10/90 /19/91 /18/92 /26/92 /30/92 /08/92 /14/93 /16/93		5,600 N 11,000 N	Not San Not San lot Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled - lot Sampled -	npled - LPH Shapled - LPH Shapled - LPH Shapled LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH	leen I Thickness I Thickness I Thickness I Thickness 1 Thickness 1,200								
/14/93 /10/93 /02/93 /01/93 /10/90 /19/91 /18/92 /26/92 /30/92 /14/93 /20/93 /16/93		5,600 N 11,000 N	Not San lot Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled -	npled - LPH Sh Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH	I Thickness I Thickness I Thickness I Thickness I Thickness								
/10/93 /02/93 /01/93 /10/90 /19/91 /18/92 /26/92 /30/92 /08/92 /14/93 /20/93 /16/93		5,600 N 11,000 N	lot Sampled - lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPH Measured LPH ell Destroyed 1,000 Measured LPH 920 Measured LPH	I Thickness I Thickness 2,000 I Thickness 1,200								
702/93 701/93 710/90 719/91 718/92 726/92 730/92 708/92 714/93 720/93 716/93		5,600 N 11,000 N	lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPHell Destroyed 1,000 Measured LPH 920 Measured LPH	2,000 I Thickness 1,200 I								
/01/93 /10/90 /19/91 /18/92 /26/92 /30/92 /08/92 /14/93 /20/93 /16/93		5,600 N 11,000 N	lot Sampled - W 1,600 lot Sampled - 990 lot Sampled - lot Sampled - lot Sampled - lot Sampled -	Measured LPHell Destroyed 1,000 Measured LPH 920 Measured LPH	2,000 I Thickness 1,200 I								
/10/90 /19/91 /18/92 /26/92 /30/92 /08/92 /14/93 /20/93 /16/93		5,600 N 11,000 N	W 1,600 ot Sampled - 990 ot Sampled - ot Sampled - ot Sampled -	eil Destroyed 1,000 Measured LPH 920 Measured LPH	2,000 1 Thickness 1,200								
/19/91 /18/92 /26/92 /30/92 /08/92 /14/93 /20/93 /16/93		N 11,000 N N	1,600 ot Sampled - 990 lot Sampled - lot Sampled - ot Sampled -	1,000 Measured LPH 920 Measured LPH	Thickness								
/18/92 /26/92 /30/92 /08/92 /14/93 /20/93 /16/93	ND	11,000 N	990 lot Sampled - lot Sampled - lot Sampled -	920 Measured LPH	Thickness								
/26/92 /30/92 /08/92 /14/93 /20/93 /16/93	ND.	11,000 N	990 lot Sampled - lot Sampled - lot Sampled -	920 Measured LPH	1,200		ND	2					
/30/92 /08/92 /14/93 /20/93 /16/93		N	ot Sampled - lot Sampled -			Talva akeas	100 000						
08/92 14/93 20/93 16/93		N	ot Sampled - lot Sampled -			and the state of t	1994 Lade 30 30 30 3						
/14/93 /20/93 /16/93			ot Sampled -	IVIÇASUJEU LE E	l Thickness								
/20/93 /16/93						Haliye yel							
16/93				npled - LPH Sh									
		Not Sampled - LPH Sheen											
	The transfer of the second	Not Sampled - LPH Sheen											
14/93				npled - LPH Sh	1444 1								
10/93				npled - LPH Sh									
02/93	Jac 2 4 198	direction.		npled - LPH Sh									
01/93				ell Destroyed									
10/90	13,000	4,800	190	110	240		ND	1					
19/91	36,000	12,000	610	710	2,800	· · · · · · · · · · · · · · · · · · ·	ND	•					
18/92	54,000	8,100	210	440	1,500		ND	2					
26/92	9,575	2,391	556	667	2,751		ND	-					
30/92	20,083	6,060.9	593	667.6	1,916.3								
08/92	41,797	9,806.2	569.2	1,700.9	3,899.2								
14/93	32,200	9,500	288	812	4,486	·							
20/93			Not Sa		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
16/93			Not Sa			···							
14/93	89,000	4,700	140	330	750								
10/93	<u> </u>	<u>-</u>											
02/93	74,000	13,000	· · · · · · · · · · · · · · · · · · ·		3,600	ян .							
01/93					0,000								
10/90		N			Thickness	(1990) - 195 Li		1					
19/91								•					
18/92								2					
						tions and the	n de gele i Grag partual tiparit	L					
	A Maria Company												
							en un Institut (f.). Produktur (f.).						
30/92													
30/92 08/92													
30/92 08/92 14/93	1. \$1 \$1 \$1 in \$1 \text{ in \$1 \text{ in \$1\$.					entraliste de la com-							
30/92 08/92		ring after til blake im	i i i i i can			erage de rejulij. Sudund uderse	ng salah di basa A. I. I. Ng palamatan di basa an						
10 0 1 1	0/93 2/93 1/93 0/90 9/91 8/92 6/92 0/92 8/92	0/93	0/93 2/93 74,000 13,000 1/93 0/90 N N N N N N N N N	D/93 Not Sa 2/93 74,000 13,000 1,400 1/93 Wr 0/90 Not Sampled - 8/92 Not Sampled - 6/92 Not Sampled - 0/92 Not Sam Not Sam 8/92 Not Sam Not Sam 8/92 Not Sam Not Sam 8/93 Not Sam 0/93 Not Sam 6/93 Not Sam	D/93 Not Sampled 2/93 74,000 13,000 1,400 1,200 1/93 Well Destroyed 0/90 Not Sampled - Measured LPH 9/91 Not Sampled - Measured LPH 8/92 Not Sampled - Measured LPH 6/92 Not Sampled - Measured LPH Sh 0/92 Not Sampled - LPH Sh 8/92 Not Sampled - LPH Sh 0/93 Not Sampled - LPH Sh 6/93 Not Sampled - LPH Sh Not Sampled - LPH Sh Not Sampled - LPH Sh 0/93 Not Sampled - LPH Sh 0/93 Not Sampled - LPH Sh	D/93 Not Sampled 2/93 74,000 13,000 1,400 1,200 3,600 1/93 Well Destroyed 0/90 Not Sampled - Measured LPH Thickness 9/91 Not Sampled - Measured LPH Thickness 8/92 Not Sampled - Measured LPH Thickness 0/92 Not Sampled - LPH Sheen 8/92 Not Sampled - LPH Sheen 4/93 Not Sampled - LPH Sheen 0/93 Not Sampled - LPH Sheen	D/93 Not Sampled 2/93 74,000 13,000 1,400 1,200 3,600	Not Sampled					

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	Ţ	F	×	MTBE	Total Lead	Source			
MW-4	05/10/93			N	lot Sampled	<u> </u>			2			
cont'd	09/02/93	33,000	900	1,100	1,900	7,300						
	10/01/93			W	ell Destroyed	, , , , , , , , , , , , , , , , , , , ,						
MW-5	10/10/90	15,000	1,700	3,000	110	1,200		ND	1			
	12/19/91	Ang App	i i i i N	lot Sampled -	Measured LPH	1 Thickness						
	02/18/92		A HERON	lot Sampled -	Measured LPI	l Thickness			2			
	05/26/92		Fig. 1. State N	lot Sampled -	Measured LPI	l Thickness						
	07/30/92		U II of the N	lot Sampled - I	Measured LPI	l Thickness						
	10/08/92		Marie Park	lot Sampled - I	Measured LPF	l Thickness						
	01/14/93		priser (d. 4 KgN)	lot Sampled -	Measured LPI	1 Thickness	Bili Derengert					
	02/20/93	Designation (Not San	npled - LPH Si	neen		anid Ed				
	03/16/93		eda ligali (118	ot Sampled -	Measured LPI	l Thickness						
	04/14/93		N	ot Sampled -	Measured LPH	l Thickness						
	05/10/93	epitale by ta	Philippin N	ot Sampled -	Measured LPF	l Thickness						
	09/02/93				Measured LPI							
	10/01/93				ell Destroyed							
MW-6	10/10/90	4,000	920	340	40	330			1			
	12/19/91	ND	55	0.7	ND	45		ND				
	02/18/92	ND	430	76	68	140		ND	2			
	05/26/92	1,986	874	280	136.5	587						
	07/30/92	4,049	794.8	275.6	210.1	736		+-				
	10/08/92	16,176	2,525.3	1,160.9	869.2	2,861.9						
	01/14/93	5,336	899.1	301.4	198.5	685.4						
Ī	02/20/93				lot Sampled		l					
Γ	03/16/93		Not Sampled									
Ī	04/14/93	9,800	730	130	140	440						
	05/10/93		Not Sampled									
ľ	09/02/93	6,100	1,200	76	27	1,200	*-					
F	06/29/94	4,800	960	27	300	790		un.	3			
	09/28/94	7,600	1,300	13	380	1,100						
	03/31/95	7,000	2,100	38	510	1,300						
	06/06/95				Well Reduction		<u> </u>	·				
	09/05/95				Well Reduction							
-	10/26/95	13,000	3,500	48	1,000	2,100						
ŀ	01/30/96	22,000	4,600	25	940	1,600						
·	04/11/96	3,200	850	14	150	200						
-	07/10/96	0,200			Well Reduction		<u> </u>					
}	10/01/96				Well Reduction							
-	03/20/97 NP	17,000	6,700	<60	1,500	680	29,000 1					
-	06/06/97	17,000			Well Reduction		29,000					
F	09/16/97				Well Reduction			-				
F	12/10/97											
F	03/23/98 NP	Not Sampled - Well Reduction Program NP 16,000 5,500 38 1,300 420 13,000										
}	06/05/98	10,000			Well Reduction		13,000					
}	09/14/98				Well Reduction	· · · · · · · · · · · · · · · · · · ·						
-	11/23/98	<u> </u>										
-	03/22/99 NP	Not Sampled - Well Reduction Program 15,000 4,100 <30 1,100 220 <1,000										
	06/09/99	15,000 4,100 <30 1,100 220 <1,000 Not Sampled - Well Reduction Program										
-	09/28/99											
	03/20/33		<u></u>	voi oampied -	Well Reduction	ni riogram						

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	7	E	X	MTBE	Total Lead	Source				
MW-6	12/22/99			Not Sampled -	Well Reduction	on Program	2011 4 10 10 10 10 10 10 10 10 10 10 10 10 10	<u> </u>	3				
Cont'd	03/08/00 NP	5,900	2,300	<25	730	<75	850						
	05/10/00		·	Not Sampled -	Well Reduction	on Program		· · · · · · · · · · · · · · · · · · ·					
	08/22/00		<u> </u>	Not Sampled -	Well Reduction	on Program							
	11/14/00			Not Sampled -	Well Reduction	on Program			4				
	02/06/01 NP	<5,000	740	2.5	560	19	66						
	05/08/01		1	Vot Sampled -	Well Reduction	n Program							
	07/16/01		1	Vot Sampled -	Well Reduction	n Program							
	10/09/01		1	Not Sampled -	Well Reduction	n Program							
	01/28/02 ^{NP}	1,400	110	0.52	96	2.2	150						
	04/17/02 NP	2,400	370	1.4	820	4.7	150						
	07/09/02		1	Not Sampled -	Well Reduction	n Program							
	10/21/02 NP	3,500	750	<5.0	630	<15	110		·				
,	02/21/03 NP	<500	0.56	<0.50	2.7	<1.5	62						
	05/08/03		1	Vot Sampled -	Well Reduction	n Program		<u></u>					
[07/25/03 ^{NP}	740	47	0.83	79	<1.5	120						
	11/21/03 NP	820	30	<0.50	32	<1.5	94						
	11/21/03	670	110	<0.50	140	<1.5	200						
Γ	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	59		5				
	06/21/04		1	Not Sampled -	Well Reduction	n Program							
Γ	09/13/04				Well Reduction								
•	12/20/04		<u> </u>	Not Sampled -	Well Reduction	n Program							
. [03/08/05	<100	<0.50	<0.50	<0.50	<1.0	3.5						
	05/16/05		٠ ١	Not Sampled -	Well Reduction	n Program							
Γ	09/12/05		Not Sampled - Well Reduction Program										
MW-7	10/10/90	38,000	11,000	2,900	3,400	7,000	장기 기본 기관	2	1				
	12/19/91		N	lot Sampled -	Measured LPF	Thickness							
	02/18/92	Not Sampled - Measured LPH Thickness											
	05/26/92		N	lot Sampled -	Measured LPF	l Thickness							
	07/30/92	Not Sampled - LPH Sheen											
	10/08/92	Not Sampled - LPH Sheen											
	01/14/93		Not Sampled - LPH Sheen										
	02/20/93		N	lot Sampled -	Measured LPH	l Thickness		Marine Manage					
	03/16/93	asi e Hua	N N	lot Sampled -	Measured LPF	l Thickness	dell'alex						
	04/14/93	ela eniki-	N	lot Sampled -	Measured LPF	l Thickness							
	05/10/93	und table in	N	lot Sampled -	Measured LPF	Thickness							
	09/02/93	Han bede		Not San	pled - LPH St	neen							
	10/01/93			W	ell Destroyed								
MW-8	10/10/91		N		Measured LPI				1				
Ī	12/19/91				Measured LPF								
Γ	02/18/92				Measured LPI				2				
	05/26/92				Measured LPF								
Ī	07/30/92				Measured LPF			•					
Γ	10/08/92				Measured LPH								
Γ	01/14/93				Measured LPF								
. [02/20/93				pled - LPH Sh								
ſ	03/16/93				pled - LPH Sh		·						
r	04/14/93		N		Measured LPF								
F	05/10/93		··		Measured LPF								
-	09/02/93	****		····	Measured LPF	• • • • • • • • • • • • • • • • • • • •							
-	10/01/93	•			ell Destroyed								

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T.	E	X	MTBE	Total Lead	Source						
MW-10	02/18/92	ND	2.1	2.6	ND	0.8		ND	2						
Ī	05/26/92	658	87	96	13	122	· ·	ND							
T	07/30/92	ND	21	14.1	4.5	12.8									
ī	10/08/92	1,969	137.3	165.2	47.8	314.1									
	01/14/93	ND	11.2	4	ND	7.5									
<u> </u>	02/21/03				lot Sampled		····								
<u>`</u>	03/16/93				lot Sampled										
F	04/14/93	270	8	9.1	ND	12									
T I	05/10/93				lot Sampled										
F	09/02/93	230	21	23	3.4	45									
	06/29/94	ND	0.89	ND	0.71	ND			3						
	09/28/94	<50	1	<0.50	0.53	<1.0									
<u> </u>	03/31/95	450	1.3	0.95	0.48	1.5									
<u> </u>	06/06/95														
·	09/09/95		Not Sampled - Well Reduction Program Not Sampled - Well Reduction Program												
F	10/26/95		Not Sampled - Well Reduction Program Not Sampled - Well Reduction Program												
<u> </u>	01/30/96	<500	<0.5	<0.5	<0.5	<1.5									
-	04/11/96	<500	<0.5	1.1	<0.5	<1.5									
-	07/10/96	_ 300	<500 <0.5 1.1 <0.5 <1.5 Not Sampled - Well Reduction Program												
	10/01/96				Well Reductio										
	03/20/97 NP	<500	<0.5	<0,5	<0.5	<1.5	40								
		<500					<10								
F	06/06/97				Well Reductio										
F	09/16/97	•			Well Reductio			.	-						
	12/10/97		Not Sampled - Well Reduction Program												
-	03/23/98 NP	<500					<10								
<u> </u>	06/05/98		Not Sampled - Well Reduction Program												
	09/14/98		Not Sampled - Well Reduction Program Not Sampled - Well Reduction Program												
L	11/23/98				,										
L	03/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10								
L	06/09/99		Not Sampled - Well Reduction Program												
L	09/28/99		Not Sampled - Well Reduction Program												
L	12/22/99		Not Sampled - Well Reduction Program												
_	03/08/00 NP	<500													
	05/10/00		Ŋ	Not Sampled -	Well Reduction	n Program	·								
	08/22/00		N	lot Sampled -	Well Reduction	n Program]						
[11/14/00		1	lot Sampled -	Well Reduction	n Program			4						
Γ	02/06/01 NP	<500	<0.50	<0,50	<0.50	<1.5	<1.0								
	05/08/01		1	lot Sampled -	Well Reduction	n Program			1						
Ī	07/16/01				Well Reduction				1						
Ī	10/09/01				Well Reduction				1						
F	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		İ						
<u> </u>	04/17/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1						
	07/09/02				tion Program				1						
<u> </u> -	10/21/02 NP	<500	<0.50	<0.50	<0.50	<1.50	<1.0		1						
	02/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	1.1		1						
F	05/08/03				Well Reduction		1.1	<u>[</u>	†						
F	03/05/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1						
<u> </u>	11/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5			1						
	11/21/03	<300		VC.U>	<0.50		<1.0		1						
-		-E00	-Λ EΛ	-0 E0	-0 E0	.4 E	-4 ^	·	1						
-	11/21/03 02/25/04	<500 <500	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<1.5 <1.5	<1.0 <1.0		5						

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	E	×	MTBE	Total Lead	Source
MW-10	09/13/04				Well Reduction				5
cont'd	12/20/04			Not Sampled -	Well Reduction	on Program			
	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		
1	05/16/05			Not Sampled -	Well Reduction	on Program			
	09/12/05			Not Sampled -	Well Reduction	on Program			
MW-11	02/18/92	ND	1,1	ND	ND	ND		ND	2
4 oktober 1	05/26/92	ND	ND	ND	ND	ND		ND	
	07/30/92	ND	ND	ND	ND	0.9			
	10/08/92	ND	ND	ND	ND	ND	i eu		
	01/14/93	ND	0.9	ND	ND	ND			
	02/21/03	5: 1 - 1 - 1 - 1 - 1 - 1			lot Sampled	Tilkina'			
	03/16/93				lot Sampled				
	04/14/93	210	ND	ND	ND	ND			
jakalawakia t	05/10/93	41 14 14 450			lot Sampled				
	09/02/93	140	ND	ND	ND	ND]		<u>na silangan</u>	
	06/29/94	60	1.2	ND	ND	1.3	The second second		
	09/28/94	<50	<0.50	<0.50	<0.50	<1.0	# #	-	3
	03/31/95	110	<0.3	<0.3	<0.3				
	06/06/95	<500	<0.5	<0.5	<0.5 <0.5	<0.6	elj eyran d ili jnig. Hiji ografis (e. e.)		• •
	09/05/95	80	<0.3			<1.5			
	10/26/95	<50		<0.3	<0.3	<0.6		- 1	
	01/30/96	<500	<0.5	<0.5	<0.5	<1.5			
1			<0.5	<0.5	<0.5	<1.5			
	04/11/96	<500	<0.5	<0.5	<0.5	<1.5			
	07/10/96	<50	<0.3	<0.3	<0,3	<0.6	24	- 1 - 1 - 1 1 1 - 1 - 1 1 - 1 1 1 1 1	
	10/01/96	<500	<0.5	<0.5	<0.5	<1.5	24		
	03/20/97 NP	<500	<0.5	<0.5	<0.5	<1.5		- 1	
	06/06/97 NP	<500	<0.5	0.5	<0.5	2	<10		
	09/16/97 NP	<50	<0.50	<0.50	<0.50	<1.5	<10		
	12/10/97 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		
	03/23/98 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		
	06/05/98 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		
	09/14/98 NP	<500	<0.50	<0.50	<0.50	<1.5	130		
	11/23/98	<50	<0.50	<0.50	<0.50	<1.0	<10		
Markey L	03/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		
	06/09/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		
	09/28/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10	400.4570	
	12/22/99 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<10		
	03/08/00 NP	<500	<0.50	<0.50	<0.50	<1.5	<5.0 ¹		
likirka ta F	05/10/00 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	08/22/00 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	11/14/00 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		4
7 - 4 7 - 4 7	02/06/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0	i i	7
	05/08/01 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	07/16/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	10/09/01 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0	1 1 1 1 1 1 1 1	
	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5			
	04/17/02 NP	<500 <500	<0.50	<0.50			<1.0		
	07/09/02	~5000]			<0.50	<1.5	<1.0	<u> </u>	
ur en en en en en en en en en en en en en	10/21/02 NP	zE00 □			Well Reductio		e gang di Alberta Partaban		
Establish.		<500	<0.50	<0.50	<0.50	<1.5	<1.0	**	
	02/21/03 ^{NP} 05/08/03	<500	<0.50	<0.50	<0.50 Well Reductio	<1.5	<1.0		

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	.	X	MTBE	Total Lead	Source				
MW-11	07/25/03 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		4				
cont'd	11/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
Ī	11/21/03	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1				
Ī	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	<1.0		5				
Ī	06/21/04		1	Vot Sampled -	Well Reduction	n Program	l .==	1	İ				
Ţ	09/13/04				Well Reduction				1				
Ī	12/20/04				Well Reduction			•	İ				
Ī	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		1				
Ī	05/16/05		1	Not Sampled -	Well Reduction	n Program			1				
	09/12/05				Well Reduction				1				
MW-12	02/18/92	19,000	1,900	3,200	2,100	11,000		28	2				
i di santani j	05/26/92	56,001	4,680	8,460	3,540	18,540			1				
	07/30/92	42,893	2,709	4,673	3,696.5	21,516	. 44		1				
	10/08/92	113,077	4,724	7,262	6,343.9	23,142.1							
	01/14/93	94,962	3,463	6,161	3,397	17,783							
. Tarper (filit i 19 interch. 44 a.) King kong diring diken belan	02/21/03				ot Sampled		gila de di Buere (1945).		1				
	03/16/93	Kiking Halaya			ot Sampled		gaaget nadere indicati Gegin Valle oord 1978 e	in datum in kilaki. A Datuat ta salaki	1				
	04/14/93	48,000	2,500	3,500	1,600	7,500							
	05/10/93	10,000			ot Sampled	7,500	<u>Legent Foul Addition II.</u> mid: No. 11. Legent No.						
	09/02/93	54,000	4,100	5,500	2,500	13,000	jednész némeső elektőgajásább. Oktob 1. szonég jadásber						
	10/01/93	1 0 - 1,000	7,100		ell Destroyed	13,000			1				
MW-13	02/18/92	ND	ND	0.5	ND ND	ND	1945, p. 15. about 	ND	-				
10100-10	05/26/92	ND ND	ND ND	ND	ND	ND		עא	}				
-	07/30/92	ND ND	ND ND	ND	ND	ND			-				
ŀ	10/08/92	ND ND	4	8.6	14.5	21.7			-				
-	01/14/93	ND ND	ND	1.2	ND				-				
-	02/21/03	IND	IND		ot Sampled	ND							
-	03/16/93		·										
-	04/14/93	ND	Not Sampled ND ND ND										
-	05/10/93	ND	ND			ND			-				
-	09/02/93	ND	ND	ND	ot Sampled	ND		1					
-	06/29/94		ND		ND	ND							
-	09/28/94	ND 150		ND -0.50	ND 0.50	ND			3				
-		<50	<0.50	<0.50	<0.50	<1.0							
}-	03/31/95	59	<0.3	<0.3	<0.3	<0.6							
-	06/06/95				Well Reduction				-				
}-	09/05/95				Well Reduction								
-	10/26/95	500			Well Reduction			1					
-	01/30/96	<500	<0.5	<0.5	<0.5	<1.5							
	04/11/96		·		Well Reduction								
_	07/10/96			 	Well Reduction								
_	10/01/96				Well Reduction			1					
ļ.	03/20/97 NP	<500	<0.5	<0.5	<0.5	<1.5	<10		ļ				
<u>Į</u>	06/06/97				Well Reduction								
Ļ	09/16/97				Well Reduction								
Ĺ	12/10/97				Well Reduction				[
Ĺ	03/23/98 NP	<500	<0.50	<0.50	<0.50	<1.5	<10						
L	06/05/98				Well Reduction								
L	09/14/98				Well Reduction								
Ĺ	11/23/98			lot Sampled -	Well Reduction								
_	03/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10						
	06/09/99		1	Not Sampled -	Well Reduction	n Program			1				

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В		E	X	MTBE	Total Lead	Source
MW-13	09/28/99	<u> </u>	· · · · · · · · · · · · · · · · · · ·	Not Sampled -	Well Reduction	n Program		a fata tana 111 i	3
cont'd	12/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10		1
	03/08/00 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<5.0 ¹		į
	05/10/00 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	2.8 1		1
	08/22/00 NP	<500	<0.50	<0.50	<0.50	<1.5	39		1
İ	11/14/00 NP	<500	<0.50	0.54	<0.50	<1.5	2		4
	02/06/01 NP	<500	<0.50	<0.50	<0.50	<1.5	4		1
	05/08/01 NP	<500	<0.50	<0.50	<0.50	<1.5	7		1
	07/16/01 NP	<500	<0.50	<0.50	<0.50	<1.5	33		1
	10/09/01 NP	<500	<0.50	<0.50	<0.50	<1.5	22		1
	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	1.1		1 .
	04/17/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1
	07/09/02 NP		1	vot Sampled -	Well Reduction	n Program	!=		1
	10/21/02 NP	<500	< 0.50	<0.50	<0.50	<1.5	1.8		
	02/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	05/08/03		1	lot Sampled -	Well Reduction	n Program			1
	07/25/03			Not Sampled -					1
Ì	11/21/03 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		1
ľ	11/21/03	<500	<0.50	<0.50	<0.50	<1.5	18		-
	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	17		5
	06/21/04			ampled - Well				l	1
	09/13/04			ampled - Well				,	1
	12/20/04			mpled - Well			-		1
	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	9.3		1
	05/16/05	***************************************		Not Sampled -	Well Reduction	n Program		·	1
	09/12/05			Not Sampled -					1
MW-14	02/18/92	ND	ND	ND	ND ND	ND		ND	2
	05/26/92	ND	ND	ND	ND	ND]
	07/30/92	ND	ND	ND	ND	0.9			
	10/08/92	ND	ND ·	ND	ND	ND.	ar Helbur		1
	01/14/93	ND.	1.3	ND	ND	ND			
	02/21/03			N	ot Sampled	latinti i angkalaninan. Pangantanan	Agente Ele	ind wa]
	03/16/93			N	ot Sampled		ur is de al jei		1
	04/14/93	ND	ND	ND	ND	ND		skil Yetan.	1
A 1995 A 1995 TO THE STORY OF T	05/10/93	Potendije.		N	ot Sampled				
	09/02/93	ND	ND .	ND	ND	ND]
	06/29/94	ND	ND	ND	ND	ND		<u></u>	3
	09/28/94	<50	<0.50	<0.50	<0.50	<1.0			
	03/31/95	59	<0.3	<0.3	<0,3	<0.6		4-1	1
	06/06/95		ntaute (street	Not Sampled -	Well Reduction	n Program			1
ilteli on dit utildi. Nati ili otto ili sin	09/05/95			lot Sampled -	Well Reduction	on Program			
	10/26/95			Not Sampled -	Well Reduction	on Program	er er er		
	01/30/96	<500	<0.5	<0.5	<0,5	<1.5			
	04/11/96	buori in placebiliprica reing Buori in a contra (Marie V		Vot Sampled -	Well Reduction	on Program			1
	07/10/96			Not Sampled -	Well Reduction	on Program			
	10/01/96			Not Sampled -			legas h		
	03/20/97 ^{NP}	<500	<0.5	<0.5	<0.5	<1.5	<10		
	06/06/97	DECEMBER OF COMMENS		Vot Sampled -	Well Reduction	on Program			
	09/16/97			Not Sampled -					
	12/10/97			Vot Sampled -			Rodingrasi.		
	03/23/98 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<10		1

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	E	X	MTBE	Total Lead	Source				
MW-14	06/05/98			Not Sampled -	Well Reduction	n Program			3				
cont'd	09/14/98			Not Sampled -	Well Reduction	n Program							
Ī	11/23/98			Not Sampled -	Well Reduction	n Program							
	03/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	<10						
	06/09/99			Not Sampled -	Well Reduction	n Program							
	09/28/99			Not Sampled -									
Ī	12/22/99			Not Sampled -									
ľ	03/08/00 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<5.0 ¹						
Ī	05/10/00			Not Sampled -	Well Reduction	n Program							
	08/22/00			Not Sampled -									
	11/14/00			Not Sampled -					4				
	02/06/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0	***	·				
•	05/08/01		***	Not Sampled -									
Ī	07/16/01			Not Sampled -									
.	10/09/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
<u> </u>	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
ŀ	04/17/02 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0	he t-r					
ŀ	07/09/02	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		Not Sampled -									
ŀ	10/21/02			Not Sampled -									
}	02/21/03 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0	ı	}				
	05/08/03	2300		Not Sampled -			<1.0						
ŀ	07/25/03												
ŀ	11/21/03 NP	-500		Not Sampled -			.1.0	<u> </u>					
}		<500	<0.50	<0.50	<0.50	<1.5	<1.0						
, }	11/21/03	<500	<0.50	<0.50	<0.50	<1.5	<1.0						
}	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	2.0		5				
	06/21/04		Not Sampled - Well Reduction Program										
}	09/13/04		Not Sampled - Well Reduction Program										
-	12/20/04			Not Sampled -				r					
-	03/07/05	<100	<0.50	<2.0	<0.50	<1.0	<1.0						
ļ	05/16/05			Not Sampled -			<u> </u>	,					
	09/13/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0						
MW-15	02/18/92	8,000	1,800	5,400	850	5,000		ND	2				
	05/26/92	2,649	2,091	2,736	876	3,476			[
	07/30/92			Wel	l Not Sampled								
	10/08/92			Wel	l Not Sampled								
	01/14/93			Wel	l Not Sampled			t Kulando					
	02/20/93			Wel	Not Sampled		Africketed oppo						
	03/16/93			Wel	l Not Sampled		a Baltina eta						
	04/14/93			Wel	Not Sampled	Chate HAT			1				
	05/10/93			Wel	Not Sampled	Kana Lagua	Militar de la composición del composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composición de la composina de la composición de la composición de la composición de la co						
	09/02/93	120,000	10,000	6,200	1,700	5,300			1				
	06/29/94	53,000	8,000	180	1,400	600			3				
	09/28/94	13,0000	5,500	11,000	7,000	24,000			1				
rens nis rekviinisellensis 🕇	03/31/95	65,000	10,000	360	1,100	680	17,000 eg. (13,000) 10,000 eg. (15,000)		1				
	06/06/95			Not Sampled -]				
	09/05/95	anus Allist		Not Sampled -			in the section	Barrion a	1				
	10/26/95	29,000	12,000	420	1,400	480			1				
	01/30/96	76,000	6,200	92	290	120			i				
	04/11/96	24,000	11,000	96	510	190			1				
	07/10/96			Not Sampled -			realest co ll in 17 11 Mai - Albandar						
g and it is broken agazige 🖡	10/01/96	<u> </u>	· · · · · · · · · · · · · · · · · · ·	Not Sampled -			e sala in e kapita ka il		J				

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	E	X	MTBE	Total Lead	Source				
MW-15	03/20/97 ^{NP}	25,000	12,000	740	1,100	1,400	210,000 ¹		3				
cont'd	06/06/97			Not Sampled -	Well Reduction	n Program	•						
	09/16/97		1	lot Sampled -	Well Reduction	n Program			-				
[12/10/97			lot Sampled -	Well Reduction	n Program							
[03/23/98 NP	6200	2500	150	480	260	32,000						
ĺ	06/05/98		1	ot Sampled -	Well Reduction	n Program							
	09/14/98		N	Not Sampled -	Well Reduction	n Program							
	11/23/98		١	lot Sampled -	Well Reduction	n Program							
1	03/22/99 ^{NP}	22000	7600	<60	760	160	180,000						
	06/09/99			lot Sampled -	Well Reduction	n Program							
	09/28/99	2,7000	11,000	120	1,400	1,200	52,000 ¹						
	12/22/99 NP	12,000	4,100	<60	440	440	32,000						
	03/08/00 NP	<500	72	<1.0	27	3.8	200		1				
	05/10/00 [№]	23,000	7,700	<100	780	<300	45,000		1				
	08/22/00 NP	23,000	14,000	<130	2,000	<380	46,000		1				
	11/14/00 NP	10,000	6,900	350	1,000	420	18,000		4				
	02/06/01 NP	3,100	1,100	<50	190	<150	15,000						
	05/08/01 NP	19,000	10,000	82	1,700	300	20,000		1 .				
	07/16/01 ^{NP}	20,000	11,000	71	1,900	390	18,000						
	10/09/01 NP	24,000	12,000	<250	1,800	<750	17,000		1				
	01/28/02 ^{NP}	4,000	1,300	<62	390	<190	24,000		1				
	04/17/02 ^{NP}	1,700	540	<100	180	<300	7,400		1				
	07/09/02		1	lot Sampled -	Well Reduction	n Program		1.	1				
	10/21/02				d - Well Not Ad				· ·				
	02/21/03				d - Well Not Ad				1				
	05/08/03		Not Sampled - Well Not Accessible										
İ	05/08/03	Not Sampled - Well Not Accessible											
ľ	11/21/03				apled - LPH Sh		•						
	02/25/04	2,400	910	<200	<200	<600	51,000		5				
	06/21/04		Not Sampled - Well Reduction Program										
	09/13/04		Not Sampled - Well Reduction Program										
ľ	12/20/04		Not Sampled - Well Reduction Program										
	03/08/05				ed - Suspect S				1				
	05/16/05		ľ		Well Reduction				1				
Ì	09/13/05	9,200	1,700	<100	170	<200	16,000	~~	1				
MW-16	02/18/92	ND	ND	0.6	ND	ND		ND	2				
	05/26/92	ND ND	12.5	ND	ND	ND							
	07/30/92	ND -	0.6	0.9	ND	ND							
	10/08/92	ND	35,8	2.5	ND	ND							
	01/14/93	ND ND	51.6	1.2	ND	ND							
	02/20/93			•	lot Sampled				Ī				
	03/16/93				lot Sampled		MU HE KUTTE		-				
	04/14/93	1000	22	ND	ND	ND	F10 10144 1 7						
	05/10/93		Ren Prince		lot Sampled			and Simulation (Spain) Charles and Spain (Spain)	1				
	09/02/93	7,100	160	ND	ND.	ND			1				
	06/29/94	13,000	2,800	1,600	270	830			3				
	09/28/94	38,000	5,900	<50	200	130			1 -				
	03/31/95	39,000	5,500	<30	440	120							
nddyrki	06/06/95			<u> </u>	Well Reduction								
	09/05/95				Well Reduction				1				
i stirki detra	10/26/95				Well Reduction				†				

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well dentification	Sampling Date	GRO	B	Т	E	X	MTBE	Total Lead	Source		
MW-16	01/30/96	25,000	1,700	5.9	110	5.6			3		
cont'd	04/11/96		. N	ot Sampled -	Well Reduction	n Program					
	07/10/96		N	ot Sampled -	Well Reduction	n Program					
Г	10/01/96		N	ot Sampled -	Well Reduction	n Program			1 .		
Ī	03/20/97 NP	<500	24	<0.5	1.3	<1.5	45,000 1				
Ī	06/06/97		N	ot Sampled -	Well Reduction	n Program	·				
Г	09/16/97		N	ot Sampled -	Well Reduction	n Program			i '		
ľ	12/10/97 NP	1,100	320	<12	<12	<24	19,000				
<u>-</u>	03/23/98 NP	<500	110	<0.50	1.5	2.8	19,000				
	06/05/98 NP	<500	20	<0.50	<0.50	<1.5	19,000		1		
F	09/14/98 NP	170	14	<0.50	<0.50	<1.5	23,000				
-	11/23/98 NP	<500	<5	<5	<5	<10	20,000		-		
<u> </u>	03/22/99 NP	<500	1.2	1.1	<0.50	<1.5	20,000		1		
F	06/09/99 ^{NP}	<500	8.9	<0.50	<0.50	<1.5	12,000				
-	09/28/99 NP	<500	9.3	<1.2	<1.2	<2.4	10,000	,	İ		
F	12/22/99 NF	<500	<0.50	<0.50	<0.50	<1.5	9,100		{		
-	03/08/00 ^{NP}	2,600	2,3	<1.5	2.1	5.2	11,000		1		
	05/10/00 NP	4,600	26	<10	<10	<30	14,000				
-	08/22/00 NP	<500 <500	<40	<40	<40	<120			, -·		
}-	11/14/00 NP	<1,000	<40 <40	<40 <40	<40 <40		9,000	***			
}-	02/06/01 ^{NP}					<120	9,400		4		
-	05/08/01 NP	<1,000	<40	<40	<40	<120	13,000		-		
 		<500	<25	<25	<25	<75	10,000				
ì-	07/16/01 NP	<500	<40	<40	<40	<120	9,300				
-	10/09/01 NP	<500	<100	<100	<100	<300	9,000				
-	01/28/02 NP	<500	<40	<40	<40	<120	7,000				
-	04/17/02 NP	<500	<50	<50	<50	<150	5,000				
-	07/09/02				Well Reduction			,	ļ		
<u> </u>	10/21/02 NP	<500	<50	<50	<50	<150	7,200				
<u> </u> _	02/21/03 NP	<500	<50	<50	<50	<150	5,600				
<u> </u>	05/08/03		Not Sampled - Well Reduction Program								
<u>L</u>	07/25/03				Well Reduction	n Program					
L	11/21/03 NP	<500	<25	<25	<25	<75	6,300				
<u> </u>	11/21/03	<500	<50	<50	<50	<150	6,000				
L	02/25/04	<500	<50	<50	<50	<150	5,900		5		
	06/21/04		N	ot Sampled -	Well Reduction	n Program		_			
	09/13/04		N	ot Sampled -	Well Reduction	n Program			1		
	12/20/04		N	ot Sampled -	Well Reduction	n Program	· · ·		1		
Γ	03/08/05			Not Analyz	ed - Suspect S	Sample			1		
Γ	05/16/05		N	ot Sampled -	Well Reduction	n Program			1		
Ī	09/12/05				Well Reduction						
MW-17	07/30/92	1,570	169.5	253.3	54.1	321.3		ND	2		
	10/08/92	20,834	3,083.5	3,086.8	785.2	2,623.5					
i kalana ji	01/14/93	SALIFIE	Sparie Sylven		Not Sampled				1		
	02/20/93				Not Sampled						
	03/16/93				Not Sampled						
	04/14/93				Not Sampled	the state of the s	<u> </u>	<u>, un lari al Giografia</u> El Eggel adjusta e	†		
e quadrata (f	05/10/93				Not Sampled						
	09/02/93	7,600	1,200	1,200	160	810		to with a consultati Tarabilitati			
	09/02/93	13,000						. And Totalia.			
			2,800	1,600	270	830		V 12 5-10 11	3		
	09/28/94 03/31/95	13,000 7,700	1,900 1,600	1,700 120	260 210	1,000 170					

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	E	X	MTBE	Total Lead	Source
MW-17	06/06/95			Not Sampled -	Well Reduction	n Program	1	1 1 1 1 1 1	3
Cont'd	09/05/95			Not Sampled -				· · · · · · · · · · · · · · · · · · ·	
Ī	10/26/95			Not Sampled -					
	01/30/96	6,900	280	42	97	78			
-	04/11/96			Not Sampled -			I	<u> </u>	1
F	07/10/96			Not Sampled -					
-	10/01/96			Not Sampled -				•	
-	03/20/97 NP	16,000	7400	170	1100	270	57,000 ¹		1
-	06/06/97			Not Sampled -			,	<u>!</u>	1
-	09/16/97			Not Sampled -					1
<u> </u>	12/10/97			Not Sampled -				 ,	1
-	03/23/98 NP	44,000	15,000	1,200	2,400	8,400	58,000		-
F	06/05/98	74,000		Not Sampled -]36,000	<u> </u>	1
-	09/14/98			Not Sampled -					1
-	11/23/98	-		Not Sampled -					-
-	03/22/99 NP	46,000		<120			07.000	1.	-
<u> </u> -		46,000	12,000		1,600	3,900	27,000		-
	06/09/99	00.000		Not Sampled -			4.000		
- ⊢	09/28/99 NP	36,000	10,000	160	1,800	2,600	4,300		
<u> -</u> -	12/22/99 NP	27,000	12,000	<120	2,200	<240	7,700 1		
-	03/08/00 NP	36,000	13,000	390	2,700	2,200	7,800		
-	05/10/00 NP	23,000	12,000	<130	1,900	1,200	5,700		
L	08/22/00 ^{NP}	14,000	6,100	<25	1,100	86	2,400		
	11/14/00 NP	20,000	1,900	26	68	130	4,100		4
L	02/06/01 NP	28,000	12,000	<40	2,500	<120	3,000		
	05/08/01 ^{NP}	14,000	8,000	43	1,500	<75	1,400		
	07/16/01 NP	19,000	10,000	95	2,000	220	1,300		1
Γ	10/09/01 NP	15,000	8,400	<100	2,000	<300	380		[
Γ	01/28/02 NP	13,000	6,300	<40	1,500	<120	760		1
	04/17/02 NP	7,900	4,100	<25	1,200	<75	520		1
	07/09/02			Vot Sampled -				<u> </u>	1
F	10/21/02 NP	2,800	600	<5.0	610	<15	13		1
T	02/21/03 NP	3,900	860	<5.0	1200	<15	110		1
-	05/08/03	3,500		Not Sampled -				<u> </u>	1
F	07/25/03 ^{NP}	700	1,600	16	1,100	46	56		
-	11/21/03 NP	5,700	2,600	<20	1,100		47		1
-	11/21/03	510	150	<5.0	80	<15			-
⊢				}			1,300		
-	02/25/04	<500	21	<5.0	42	<15	620	₩	5
	06/21/04			Not Sampled -					1
-	09/13/04			Not Sampled -					1
-	12/20/04			Not Sampled -	r			,	1
L	03/08/05	160	4.7	<2.5	4.3	<5.0	220		
<u> </u>	05/16/05			Not Sampled -					
	09/13/05	790	130	3.1	70	27	150		
- MW-18	07/30/92	ND	ND	2.4	ND	ND	-4		2
ydy galdi F	10/08/92	ND	ND	ND.	ND	ND			
thiles /	01/14/93	· I ND	4.6	1.4	ND	0.9	Distributed the]
yayakinilik	02/20/93		P H 4 PANA		ot Sampled				1
	03/16/93			· · · · · · · · · · · · · · · · · · ·	ot Sampled			Rogertianiu	1
	04/14/93	ND	ND	ND	ND	ND			
ėn saudyt	05/10/93			<u> </u>	ot Sampled				1
in terepret i di di della di di della 🖵	09/02/93	athia tant ,	ara e a companyon da a companyon da a companyon da a companyon da a companyon da a companyon da a companyon da	aretar a la tarif	Frankishion	rear and the rear teach of the	<u>ta in an anti-table de l'</u>	Carry read that Tare	J

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well dentification	Sampling Date	GRO	В	T	E	X	MTBE	Total Lead	Source
MW-18	06/29/94			Ņ	ot Sampled				3
cont'd	09/28/94	330	<0.50	<0.50	<0.50	<1.0			
L	03/31/95	710	1.5	2.2	0.87	4.6			-
	06/06/95	<500	<0.5	<0.5	<0.5	<1.5			
	09/05/95	1,100	<6.0	<6.0	<6.0	<12			
	10/26/95	<50	1.2	<0.5	<0.5	<1.5			
	01/30/96	<500	<0.5	<0.5	<0.5	<1.5			
	04/11/96	<500	<0.5	<0.5	<0.5	<1.5			
ſ	07/10/96	110	43	<0.3	<0.3	<0.6	1,700		1
	10/01/96	<500	<0.5	<0.5	<0.5	<1.5	5,500		1
	03/20/97 NP	<500	<0.5	<0.5	<0.5	<1.5	1,600 1		1
Ī	06/06/97 NP	<500	<0.5	0.54	<0.5	<1.5	440		1
Ī	09/16/97 ^{NP}	<50	<0.50	<0.50	<0.50	<1.5	370		1
ľ	12/10/97 NP	<500	<0.50	< 0.50	<0.50	<1.5	300		
Ì	03/28/98 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<10		1
.	06/05/98 NP	<500	<0.50	<0.50	<0.50	<1.5	81		1
·	09/14/98 NP	<500	<0.50	<0.50	<0.50	<1.5	340		
	11/23/98 NP	<50	<0.5	<0.5	<0.5	<1.0	18		1
F	03/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	7,700		
-	06/09/99 NP	<500	<0.50	<0.50	<0.50	<1.5	5,700		ł
	09/28/99 NP	<500	<0.50	<0.50	<0.50	<1.5	8,400		-
···	12/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	4,600		1
	03/08/00 NP	550	<0.50	<0.50	<0.50	<1.5	6,800		ł
	05/10/00 NP	3,000	10	<10	<10	<30	11,000		ł
	08/22/00 NP	<500	<13	<13	<13	<38			-
	11/14/00 NP						7,700		4
	02/06/01 NP	<500	<20	<20	<20	<60	7,300		"
		<500	<25	<25	<25	<75	5,700		ł
-	05/08/01 NP	<500	<25	<25	<25	<75	8,600		
-	07/16/01 NP	<500	<25	<25	<25	<75	8,300		1
-	10/09/01 NP	<500	<100	<100	<100	<300	5,600		
ļ.	01/28/02 NP	<500	<40	<40	<40	<120	5,600		
L	04/17/02 NP	<500	<25	<25	<25	<75	6,500		
L	07/09/02 NP	<500	<25	<25	<25	<75	7,800		
L	10/21/02 NP	<500	<50	<50	<50	<150	9,100		
L	02/21/03 NP		<20	<20	<20	<60	6,000		
L	05/08/03 ^{NP}	<500	<0.500	<0.500	<0.500	<1.50	3,840]
	07/25/03 NP	<500	<200	<200	<200	<600	73,000]
	11/21/03 ^{NP}	<500	<20	<20	<20	<60	2,800		j
	11/21/03	<500	<25	<25	<25	<75	6,100		<u> </u>
	02/25/04	<500	<50	<50	<50	<150	9,100		5
Γ	06/21/04	<500	<50	<50	<50	<150	8,200]
Ī	09/13/04	<500	<50	<50	<50	<150	6,100		1
· [12/20/04	1,300	<50	<50	<50	<50	2,900		1
ľ	03/07/05	<100	<1.2	<1.2	<1.2	<2.5	200		1
ľ	05/16/05	680	<50	<50	<50	<100	3,300		1
ŀ	09/12/05	740	<25	<25	<25	<50	4,300	 	1
MW-19A*	07/30/92	ND	ND	ND	ND.	1.3		ND	2
	10/08/92	ND .	ND -	ND	ND	ND ND			1 -
	01/14/93	ND	0.8	1.5	ND	0.8		i antico est.	†
	02/20/93		ras a g.y in sig Pully dikasiy d		ot Sampled			ga gesutterbad) Kans behad kabad	1
e andre alle i en el defenio il del	03/16/93	1000 1000 100			lot Sampled	gertin jiriphe jedi,	11	in the special and will distribute the	J

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well dentification	Sampling Date	GRO	В	.	E	X	MTBE	Total Lead	Source
MW-19A*	04/14/93	ND	ND	ND	ND .	ND		-	2
cont'd	05/10/93			N	ot Sampled]
Ī	09/02/93	ND	ND	ND	ND	ND]
Γ	06/29/94	1,700	ND	ND	ND	ND			3
	09/28/94	1,800	<2.5	<2.5	<2.5	<5.0	·		1
. [03/31/95	4,300	8.9	2.8	2.3	7.7		₽-	1
Γ	06/06/95		١	lot Sampled -	Well Reduction	n Program			
<u> </u>	09/05/95	4,600	<12	<12	<12	<24		**	1
ſ	10/26/95	<50	<0.5	<0.5	<0.5	<1.5]
Γ	01/30/96	4,200	<0.5	<0.5	<0.5	<1.5]
	04/11/96	<500	51	1	<0.5	1.8]
, [07/10/96	110	43	<0.3	<0.3	<0.6	7,400	==	1
Ī	10/01/96	<500	<0.5	<0.5	<0.5	<1.5	12,000		1
-	3/20/397 NP	<500	<0.5	<0.5	<0.5	<1.5	34		1
<u> </u>	06/06/97 NP	<500	13	<0.5	<0.5	<1.5	2,500 ¹		1
[09/16/97 NP	<50	<0.50	<0.50	<0.50	<1.5	35		1
<u> </u>	12/10/97 NP	<500	<0.50	<0.50	<0.50	<1.5	1,100		1
<u> </u>	03/23/98 NP	<500	0.5	<0.50	<0.50	<1.5	760		1
<u> </u>	06/05/98 NP	<500	<0.50	<0.50	<0.50	<1.5	95		
-	09/14/98 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	1,900		1
. -	11/23/98 NP	<50	<0.50	<0.50	<0.50	<1.0	110		1
-	03/22/99 NP	<500	2.2	<0.50	<0.50	<1.5	320		1
	06/09/99 NP	<500	<0.50	<0.50	<0.50	<1.0	1,200		
	09/28/99 NP	<500 <500	<0.50	<0.50	<0.50	<1.5	720 ¹		}
-	12/22/99 NP	<500	<0.50	<0.50	<0.50	<1.5	340		
	03/08/00 NP	<500	<0.50	<0.50	<0.50	<1.5	280		
-	05/06/00 NP	<500 <500	1.3	<0.50	<0.50	<1.5	280		
<u> </u>	08/22/00 NP	<500 <500	<1.3	<1.3	<1.3	<3.8	420		
-	1.1/14/00 NP			-	!	<u> </u>			
-	02/06/01 ^{NP}	<500	<1.3	<1.3	<1.3	<2.5	220		4
-	02/06/01	<500	<0.50	<0.50	<0.50	<1.5	97		-
-	05/08/01 NP	<500	<0.50	<0.50	<0.50	<1.5	110		4
-	07/16/01 NP	<500	<0.50	<0.50	<0.50	<1.5	260		1
-	10/09/01 NP	<500	<5.0	<5.0	<5.0	<15	220		<u> </u>
-	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	4.3		1
·	04/17/02 NP	<500	<0.50	<0.50	<0.50	<1.5	1.4		-
-	07/09/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0]
-	10/21/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		_
•	02/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
_	05/08/03 NP	<500	<0.500	<0.500	<0.500	<1.50	<1.00		1
Ļ	07/25/03 NP	<500	<0.50	<0.50	<0.50	<1.5	1		1
_ _	11/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	1.8		1
Ļ	11/21/03	<500	<0.50	<0.50	<0.50	<1.5	16		
Ĺ	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	10		5
Ĺ	06/21/04	<500	<0.50	<0.50	<0.50	<1.5	14	<u></u>	1
	09/13/04	<500	<0.50	<0.50	<0.50	<1.5	6.3		
	12/20/04	<100	<1.0	<1.0	<1.0	<1.0	3.2		
[03/07/05	<100	<0.50	<0.50	<0.50	<1.0	8.6		
Γ	05/16/05	<100	<0.50	<0.50	<0.50	<1.0	2.8		
「	09/12/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		<u></u> .
MW-19B*	06/29/94	70,000	8,300	14,000	3,400	17,000			3

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В		В	X	MTBE	Total Lead	Source
MW-19B*	03/31/95	51,000	5,600	8,500	2,300	14,000			3
cont'd	06/06/95	63,000	5,300	7,900	2,900	13,000			
	09/05/95	100,000	6,400	10,000	3,400	18,000	==		
[10/26/95	46,000	2,800	3,000	2,600	9,400		-	
	01/30/96	61,000	6,100	6,500	3,000	13,000			
	04/11/96	59,000	4,900	3,100	3,200	12,000			
	07/10/96	33,000	2,900	3,000	2,200	8,200	970		
	10/01/96	32,000	4,900	6,400	2,800	11,000	260		
	03/20/97 NP	11,000	1,100	1,100	610	3,500	<50		
	06/06/97 NP	18,000	1,500	2,500	1,000	4,700	130		
	09/16/97 ^{NP}	14,000	1,900	1,200	1,100	4,100	130		
	12/10/97 NP	24,000	2,300	1,500	1,400	5,500	<400		
	03/23/98 NP	24,000	1,800	1,800	1,200	4,700	180		
Ī	06/05/98 NP	42,000	2,600	4,000	1,900	8,300	<1,000		
. [09/14/98 NP	22,000	2,500	330	1,600	4,100	<1,000		
` 	11/23/98 NP	60,000	3,400	4,700	2,300	10,000	<250		
	03/22/99 NP	11,000	760	100	410	800	<400		
-	06/09/99 NP	25,000	2,500	1,300	1,500	4,400	<1,000		
-	09/28/99 NP	27,000	2,400	860	2,000	4,600	<500		
-	12/22/99 NP	11,000	720	250	780	1,700	<1,000		
	03/08/00 NP	6,000	710	120	600	680	<5.0	#L	
. -	05/10/00 NP	11,000	1,400	170	1,500	620	<8.0 ¹		
-	08/22/00 NP	5,300	690	52	740	290	<5.0		
	11/14/00 NP	6,000	860	1,000	15	48	<5.0 <5.0		4
-	02/06/01 NP	6,300	720	160	880			to be	4
-	05/08/01 NP	19,000	1,900			400	<5.0		
-	03/08/01 NP			810	2,300	3,200	<13		
ļ-	10/09/01 NP	22,000	1,900	870	2,400	3,800	<100		
-	01/28/02 NP	15,000	1,100	180	1,600	1,900	<80		
-	01/28/02 04/17/02 NP	3,800	280	40	470	150	<4.0		
-	04/17/02 07/00/00 NP	4,000	250	23	530	300	<5.0		
-	07/09/02 NP	.6,800	380	18	630	330	<5.0		
ļ	10/21/02 NP	3,900	450	<5.0	1,100	19	<10		
-	02/21/03 NP	1,400	77	<5.0	410	<15	<10		
-	05/08/03 NP	7,100	302	9.67	1,690	91.1	<1.00		
_	07/25/03 NP	3,200	180	<5.0	950	<15	12		
_	11/21/03 NP	4,600	150	<5.0	1,000	22	63		
<u>_</u>	11/21/03	6,800	190	160	1,400	550	290	:	
	02/25/04	7,600	170	340	1,800	1,100	180		5
L	06/21/04	7,100	75	110	1,100	440	29		
_	09/13/04	8,300	68	180	1,200	810	<20		
L	12/20/04	2,100	20	35	280	140	<5.0		
Ĺ	03/08/05	8,900	81	840	1,800	2,200	<25		
	05/16/05	4,100	52	330	1,200	1,100	<25		
	09/12/05	4,700	40	190	1,000	640	<17		
MW-20	06/29/94	62,000	5,700	14,000	3,000	16,000			3
	09/28/94	52,000	5,000	3,700	2,700	12,000			
	03/31/95	14,000	2,800	950	2,300	6,300			
	06/06/95				Well Reduction				
takilakil	09/05/95				Well Reduction		Mag Li II A		
	10/26/95				Well Reduction				
	01/30/96	21,000	1,000	1,100	1,600	3,800			

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	E	X	MTBE	Total Lead	Source		
MW-20	04/11/96		<u> </u>	Not Sampled -	Well Reduction	on Program	<u>Proteir — er gesterm</u>	La estado as esta	3		
cont'd	07/10/96				· Well Reduction				1		
<u> </u>	10/01/96				Well Reduction				1		
Ì	3/20/97 NP	12,000	930	190	1,700	1,000	38 1		1		
-	06/06/97				Well Reduction	'			1 .		
	09/16/97				Well Reduction				1		
-	12/10/97	-			Well Reduction				1		
	03/23/98 NP	13,000	240	260	1,900	2,300	390		1		
	06/05/98			L	Well Reduction	1			1		
F	09/14/98				Well Reduction				1		
	11/23/98				Well Reduction				┪		
-	03/22/99 NP	10,000	68	97	810	410	<200	***	-		
-	06/09/99	10,000		<u> </u>	Well Reduction		\200		1		
<u> </u>	09/28/99				Well Reduction				-		
-	12/22/99 NP	2,700	43	17	380	85	<400		i		
-	03/08/00 NP	5,700	110	94			<10 ¹		-		
-	05/10/00 NP	2,100	76	ł	1,300	400	····		-		
-	08/22/00 NP	2,900	82	8.6	600	<19	<2.0 1				
<u> </u> -	11/14/00 NP			37	590	160	<5.0				
	02/06/01 NP	2,500	93	34	740	93	<5.0		4		
	05/08/01 NP	2,900	22	21	1,200	120	<10		4		
-	05/08/01 NP	3,800	60	36	1,400	146	<10		_		
 -	07/16/01 NP	3,900	60	57	720	240	<10		4		
į-	10/09/01 NP	3,100	- 54	16	960	82	<20		,		
. -	01/28/02 NP	550	20	1.1	56	7.2	<1.0		4		
-	04/17/02 NP	4,200	28	26	610	130	<1.0		_		
-	07/09/02	Not Sampled - Well Reduction Program									
-	10/21/02 NF	510	4.8	<0.5	14	<1.5	<1.0		1		
-	02/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0		<u> </u>		
-	05/08/03				Well Reduction	7					
-	07/25/03 NP	<500	1.3	<0.50	1.1	<1.5	<1.0				
-	11/21/03 NP	<500	2.8	<0.50	5.2	<1.5	<1.0				
-	11/21/03	<500	1.2	<0.50	0.83	<1.5	<1.0				
L	02/25/04	<500	<0.50	<0.50	1.2	<1.5	<1.0		5		
<u> </u>	06/21/04				Well Reduction						
<u></u>	09/13/04				Well Reduction						
Ĺ	12/20/04			Not Sampled -	Well Reduction	n Program					
	03/08/05	<100	<0.50	<0.50	13.0	5.4	<1.0				
_	05/16/05		١	Not Sampled -	Well Reduction	n Program			1		
	09/12/05		1	Not Sampled -	Well Reduction	n Program			1		
MW-21	06/29/94	38,000	1,800	3,500	2,000	6,900			3		
	09/28/94	20,000	1,600	2,800	840	4,300			1		
	03/31/95	17,000	1300	2000	1,600	4300			1		
	06/06/95	Mark interior	. 344	lot Sampled -	Well Reduction	n Program		g-40125017	1		
	09/05/95			· · · · · · · · · · · · · · · · · · ·	Well Reduction		Maria Amerika				
	10/26/95				Well Reduction			Jestane da	1		
	01/30/96	5,300	270	280	540	970			1		
	04/11/96				Well Reduction				1		
	07/10/96				Well Reduction						
	10/01/96				Well Reduction				1		
	03/20/97 NP	7800	730		1300	840	<25		+		
	06/06/97				Well Reduction	distribution of the state of th			1		

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	T	E	X	MTBE	Total Lead	Source
MW-21	09/16/97		<u> </u>	Not Sampled -	Well Reductio	n Program			
cont'd	12/10/97		1	Not Sampled -	Well Reduction	n Program			
Ţ	03/23/98 NP	10,000	810	210	1,100	1,600	120		
ļ	06/05/98		<u>_</u>	Vot Sampled -	Well Reduction	n Program			
Ī	09/14/98			Not Sampled -	Well Reduction	n Program			
Ţ	11/23/98				Well Reduction		•		
ļ	03/22/98 NP	41,000	600	5,800	1,800	11,000	<1,000		
Ī	06/09/99				Well Reduction	n Program			
ļ	09/28/99 NP	12,000	430	300	1,300	2,300	<400		
	12/22/99 NP	6,800	150	200	530	1,100	<1,000		
	03/08/00 NP	5,800	310	160	1,100	360	<5.0 ¹		
}	05/12/00 ^{NP}	28,000	780	1,800	2,900	6,100	<80		
ŀ	08/22/00 NP	30,000	600	990	2,700	8,000	<25		
-	11/14/00 NP	19,000	300	100	2,200	2,900	<25		4
-	02/06/01 ^{NP}	5,400	160	170	1,100	300	<10		•
-	05/08/01 NP		66	<5.0	850	<15	<10		
<u> </u>	07/16/01 NP	3,000		32		71	<5.0		
}	0//16/01 10/00/01 NP	3,900	130		1,500		<50		
-	10/09/01 NP	10,000	120	35	2,300	1,100			
	01/28/02 NP	2,200	19	18	510	38	<10		ĺ
ļ	04/17/02 NP	6,300	69	100	1,300	460	<5.0		
	07/09/02	2 - 2 2			Well Reduction		- 40		
<u> </u>	10/21/02 NP	3,700	50	7.8	1,200	<15	<10		
1	02/21/03 ^{NP}	<500	20	<2.5	320	<7.5	<5.0		
	05/08/03				Well Reduction	,			
	07/25/03 NP	1,700	40	<2.5	540	150	<5.0		
	11/21/03 NP	1,600	110	<5.0	550	30	<10		ļ
	11/21/03	4,900	170	80	720	1,000	<10		
ļ	02/25/04	6,000	240	160	1,000	1,800	<10	<u></u>	5
	06/21/04				Well Reduction				
	09/13/04				Well Reduction				
	12/20/04			Not Sampled -	Well Reduction	on Program			
	03/08/05	9,700	490	490	1,700	4,500	84]
	05/16/05			Not Sampled -	Well Reduction	on Program			
	06/21/04			Not Sampled -	Well Reduction	on Program			
MW-22	07/25/00	<500	<1.0	<2.0	<2.0	<4.0	54		3
a agaile k film gar dii libe Namalih alkas disa di	08/22/00 NP	<500	<0.50	<0.50	<0.50	<1.5	120		
	11/14/00 NP	<500	<0.50	<0.50	<0.50	<1.5	100		4
	02/06/01 NP	<500	<0.50	<0.50	< 0.50	<1.5	73		
	05/08/01 NP	<500	<0.50	<0.50	<0.50	<1.5	54		
	07/16/01 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	44		1
	10/09/01 ^{NP}		<0.50	<0.50	<0.50	<1.5	22		1
	01/28/02 ^{NP}		<0.50	<0.50	<0.50	<1.5	44		1
	04/17/02 ^{NP}	4	<0.50	<0.50	<0.50	<1.5	21		
	07/09/02 NP		<0.50	<0.50	<0.50	<1.5	13		
	10/21/02 NP		<0.50	<0.50	<0.50	<1.50	17		1
top bette 14	02/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	27		1
	05/08/03 NF		<0.500	<0.500	<0.500	<1.50	7.90		1
	05/06/03 07/25/03 NP		<0.50	<0.50	<0.50	<1.5	7.50		1
						<1.5	8.9		1
	11/21/03 NP	<500	<0.50	<0.50	<0.50				1
U.S. 41.7 # 5 Pub 4 Pub 4 Pub 4 Pub 1	11/21/03	<500	<0.50	< 0.50	<0.50	<1.5	33	i i de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión de l	4

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	GRO	В	Т	E	X	MTBE	Total Lead	Source		
MW-22	06/21/04	<500	<0.50	<0.50	<0.50	<1.5	47		5		
cont'd	09/13/04	<500	<0.50	<0.50	<0.50	<1.5	72				
ì	12/20/04	<100	<1.0	<1.0	<1.0	<1.0	38		1		
	03/07/05	<100	<0.50	1.1	<0.50	<1.0	8.8				
	05/16/05	<100	<0.50	<0.50	<0.50	<1.0	8.0				
ľ	09/12/05	<100	<0.50	<0.50	<0.50	<1.0	18				
MW-23	07/25/00	<500	<1.0	<2.0	<2,0	<4.0	1.0		3		
	08/22/00 NF	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
	11/14/00 NP	<500	<0.50	<0.50	<0.50	<1.5	1.0	4	4		
	02/06/01 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		*		
	05/08/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
idika Jarat	07/16/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
	10/09/01 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
	01/28/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
	04/17/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
Middalaha.	07/09/02				Well Reduction						
	10/21/02 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
la jaran da b	02/21/03 NP	<500	<0.50	<0.50	<0.50	<1.5	<1.0				
	05/08/03	\000			Well Reduction		<1. 0				
	07/25/03	<u>Li de la casa de la citado de la citado de la citado de la citado de la citado de la citado de la citado de la</u>			Well Reduction			<u>1960 - Proefic Gael</u> 1960 - Peur Alland			
	11/21/03 ^{NP}	<500	<0.50	<0.50	<0.50		I 40		_		
	11/21/03	<500	<0.50	<0.50	<0.50	<1.5	<1.0		. 5		
	02/25/04	<500 <500	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<1.5	<1.0	4-			
	06/21/04	<500				<1.5	<1.0				
	09/13/04	Not Sampled - Well Reduction Program Not Sampled - Well Reduction Program									
	12/20/04	<u> 1911 (11) yang dia seba</u> Kanggan diang 191									
		-100			Well Reduction						
	03/07/05	<100									
	05/16/05								·		
MW-24	09/12/05 11/21/03 ^{NP}	F00			Well Reduction						
10100-24		<500	<5.0	<5.0	<5.0	<15	790				
-	11/21/03	<500	<2.5	<2.5	<2.5	<7.5	480				
}-	02/25/04	<500	<2.5	<2.5	<2.5	<7.5	430				
}-	06/21/04 09/13/04	<500 <500	<2.5	<2.5	<2.5	<7.5	340	p. p.			
-	12/20/04	<100	<2.5 <2.5	<2.5	<2.5	<7.5	450				
· -	03/08/05	<100	<0.50	<2.5	<2.5	<2.5	130				
	05/06/05	<100	<0.50	<0.50 <0.50	<0.50 <0.50	<1.0 <1.0	69				
	09/12/05	<100	<0.50	<0.50	<0.50		32				
MW-25	11/21/03 NP	<500	<0.50 <10	<0.50 <10		<1.0	27	 			
	11/21/03	<500 <500	<10		<10	<30	2,400				
	02/25/04			<10	<10	<30	2,000	di uni t muis Parte de l'este de			
		<500	<10	<10	<10	<30	2,200				
	06/21/04	-E00			pled - Inacces						
	09/12/04	<500	,1.0	<1.0	<1.0	<3.0	140				
48 H 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12/20/04	<100	<1.0	<1.0	<1.0	<1.0	82				
alla prijete i 🖡	03/08/05	<100	<0.50	<0.50	<0.50	<1.0	72				
	05/16/05	<100	<0.50	<0.50	<0.50	<1.0	3.8				
48 CLV # 59 H. (.)	09/12/05	<100	<0.50	<0.50	<1.0	<1.0	1.9				

SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS ARCO Facility #1919

All Results Reported in Micrograms per Liter (µg/L)

Well Identification	Sampling Date	GRO	В	I	5 ()	×	МТВЕ	Total Lead	Source
MW-26	11/21/03 ^{NP}	<500	<0.50	<0.50	<0.50	<1.5	<1.0		5
	11/21/03	<500	<0.50	<0.50	<0.50	<1.5	<1.0		
	02/25/04	<500	<0.50	<0.50	<0.50	<1.5	<1.0]
	06/21/04	<500	<0.50	<0.50	<0.50	<1.5	<1.0]
	09/13/04	<500	<0.50	<0.50	<0.50	<1.5	<10		
	12/20/04	<100	<1.0	<1.0	<1.0	<1.0	<1.0		
	03/07/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		
	05/16/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		
	09/12/05	<100	<0.50	<0.50	<0.50	<1.0	<1.0		

Notes:

TPHg = Total petroleum hydrocarbons as gasoline (DHS Modified EPA Method 8015)

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total Xylenes

BTEX = Analyzed by EPA Method 8021, before 08/01/00. Analyzed by EPA Method 8260B beginning 08/01/00.

MTBE = Methyl-tert-butyl ether analyzed by EPA Method 8021 before 08/01/00 unless otherwise noted.

Beginning 08/01/00 MTBE analyzed by EPA Method 8260B

1 = MTBE Analyzed by EPA Method 8260

< = Less than indicated laboratory reporting limit

-- = Sample not analyzed

NP = Sample collected by no-purge sampling procedures

* MW-19 was renamed MW-19A after the installation of another well designated MW-19 (now MW-19B).

Sources:

- 1 Alton Geoscience, 1992, Second Quarter 1992 Status Report on Fluid-Level Monitoring and Ground Water Sampling at ARCO Station 1919, 660 Via de la Valle, Solana Beach, California (Unauthorized Release No. T1985; Control No.H05166-002), dated July 21, 1992.
- 2 Alton Geoscience, 1994, Third Quarter 1993 Ground Water Monitoring and Sampling Report, ARCO Station 1919, 660 Via de la Valle, Solana Beach, California (Unauthorized Release No. T1985; Control No. H05166-002), dated January 19, 1994.
- 3 SECOR International Incorporated, 2000, Site Assessment Report, ARCO Facility #1919, 660 Via de la Valle, Del Mar, CA, SAM Case # H05166, dated October 20, 2000.
- 4 SECOR International Incorporated, 2004, ARCO Groundwater Remediation Report [Fourth-2003], dated January 30, 2004.
- **5** SECOR International Incorporated, 2005, ARCO Groundwater Monitoring Report [Third-2005], dated October 15, 2005.

TABLE 4B

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	ТВА	DIPE	ETBE	ТАМЕ	ETHANOL	Source				
MW-1			Well Dest	royed 10/93	<u> </u>		1				
MW-2			Well Dest	royed 10/93							
MW-3			Well Dest	royed 10/93		<u> </u>	1				
MW-4		hada ja daga karel		royed 10/93			1				
MW-5			- in the second	royed 10/93	<u> </u>		1				
MW-6	08/22/00			oled - Well Reducti	on Program		1				
	11/14/00	tayak ya kirika a		oled - Well Reducti			-				
	02/06/01 NP	<130	<25	<25	<25		1				
	05/08/01		1	oled - Well Reducti							
	07/16/01	data mengana an	· ·	oled - Well Reducti			1				
	01/28/02 NP	<25	<5.0	<5.0	17						
	04/17/02 NP	<25	<5.0	<5.0	24						
	07/09/02			oled - Well Reducti	- Living in the second		1				
	10/21/02 ^{NP}	<500	<50	<50	<50		1				
	02/21/03 NP	<50	<5.0	<5.0	<5.0	<150					
	05/08/03			oled - Well Reduction			1				
	07/25/03 ^{NP}	<50	<5.0	<5.0	16	<150					
	11/21/03 NP	<50	<5.0	<5.0	11	<150					
Principalitak bentak eta 1 Salikuri dalam bentah	11/21/03	66	<5.0	<5.0	8.1	<150	1				
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2				
	06/21/04			oled - Well Reducti			_				
	09/13/04			oled - Well Reducti			 				
	12/20/04			oled - Well Reduction							
	03/08/05	<25	<2.0	<2.0	<2.0	<500					
	05/16/05			oled - Well Reduction			1				
	09/12/05 Not Sampled - Well Reduction Program										
MW-7	Well Destroyed 10/93										
MW-8	Well Destroyed 10/93										
MW-10	08/22/00										
	11/14/00	Not Sampled - Well Reduction Program									
Ī	02/06/01 NP	<25 <5.0 <5.0 <5.0									
	05/08/01		Not Samp	oled - Well Reduction	on Program	***************************************	1				
Ī	07/16/01		Not Sam	oled - Well Reduction	on Program						
	10/09/01		Not Samp	oled - Well Reduction	on Program	*****	1				
	01/28/02 NP	<25	<5.0	<5.0	<5.0		1				
	04/17/02 NP	<25	<5.0	<5.0	<5.0						
Ī	07/09/02	· · · · · · · · · · · · · · · · · · ·	Not Samp	oled - Well Reduction		-t <u>.</u>	1				
Ī	10/21/02 ^{NP}	<50	<5.0	<5.0	<5.0		1				
	02/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150	1				
Ţ	05/08/03			oled - Well Reduction			1				
ļ	07/25/03 NP	<50	<5.0	<5.0	<5.0	<150	1				
Ţ	11/21/03 NP	<50	<5.0	<5.0	<5.0	<150	1				
Ţ	11/21/03	<50	<5.0	<5.0	<5.0	<150	1				
[02/25/04	<50	<5.0	<5.0	<5.0	<150	2				
Ţ	06/21/04			oled - Well Reduction			1				
Ţ	09/13/04			oled - Well Reduction			1				
Ţ	12/20/04			oled - Well Reduction		·					
ļ	03/08/05	<25	<2.0	<2.0	<2.0	<500	1				
ľ	05/16/05			oled - Well Reduction							
	09/12/05			oled - Well Reduction			1				

TABLE 4B

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	ТВА	DIPE	ETBE	TAME	ETHANOL	Sourc
MW-11	08/22/00 NP	<50	<5.0	<5.0	<5.0	++	1
	11/14/00 ^{NP}	<25	<5.0	<5.0	<5.0	· 	
	02/06/01 NP	<25	<5.0	<5.0	<5.0	**	
	05/08/01 ^{NP}	<25	<5.0	<5.0	<5.0 ı		
	07/16/01 NP	<25	<5.0	<5.0	<5.0	**	
	10/09/01 NP	<25	<5.0	<5.0	<5.0		
	01/28/02 NP	<25	<5.0	<5.0	<5.0		
	07/09/02		Not Samp	led - Well Reductio	n Program		
	10/21/02 NP	<50	<5.0	<5.0	<5.0		
	02/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150	1
	05/08/03		Not Sampl	led - Well Reductio	n Program		
	07/25/03	<50	<0.50	<0.50	<0.50	<150	
	11/21/03 NP	<50	<5.0	<5.0	<5.0	<150	
	11/21/03	<50	<5.0	<5.0	<5.0	<150	
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2
	06/21/04		Not Sampl	ed - Well Reductio	n Program		
	09/13/04			ed - Well Reductio			
	12/20/04		Not Sampl	ed - Well Reductio	n Program		
	03/08/05	<25	<2.0	. <2.0	<2.0	<500	
	05/16/05			ed - Well Reductio		•	
· · · · · · · · · · · · · · · · · · ·	09/12/05	•		ed - Well Reductio	n Program		
MW-12			Well Destro	oyed 10/93			1
MW-13	08/22/00 NP	<50	<5.0	<5.0	<5.0		
	11/14/00 NP	<25	<5.0	<5.0	<5.0		
	02/06/01 NP	<25	<5.0	<5.0	<5.0	***	
	05/08/01 NP	<25	<5.0	<5.0	<5.0		
	07/16/01 NP	<25	<5.0	<5.0	<5.0		
	10/09/01 ^{NP}	<25	<5.0	<5.0	<5.0		
	01/28/02 NP	<25	<u>_</u> <5.0	<5.0	<5.0	- H-	
	04/17/02 ^{NP}	<25	<5.0	<5.0	<5.0		
	07/09/02			ed - Well Reductio	n Program		
	10/21/02 NP	<50	<5.0	<5.0	<5.0		
	02/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150	
	05/08/03			ed - Well Reductio			
	07/25/03	·	Not Sampl	ed - Well Reductio	n Program		
	11/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150	
	11/21/03	<50	<5.0	<5.0	<5.0	<150	
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2
	06/21/04			ed - Well Reduction			
	09/13/04			ed - Well Reduction			
	12/20/04	<u> </u>		ed - Well Reduction	n Program		
	03/08/05	<25	<2.0	<2.0	<2.0	<500	
	05/16/05			ed - Well Reduction			
	09/12/05			ed - Well Reduction			
MW-14	08/22/00			ed - Well Reduction		utti ficto	1
	11/14/00		Not Sample	ed - Well Reduction	n Program		
	02/06/01 ^{NP}	<25	<5.0	<5.0	<5.0		
	05/08/01		Not Sample	ed - Well Reduction	n Program		
	07/16/01						
	10/09/01 NP	<25	<5.0	<5.0	<5.0		

TABLE 4B

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

Well Identification	Sampling Date	ТВА	DIPE	ETBE	TAME	ETHANOL	Source						
MW-14	01/28/02 NP	<25	<5.0	<5.0	<5.0		1 1						
cont'd	04/17/02 NP	<25	<5.0	<5.0	<5.0		1						
	07/09/02		Not Sample	ed - Well Reduction	n Program	•	1						
	10/21/02		·	Not Sampled									
	02/21/03 NP	<50	<5.0	<5.0	<5.0	<150	1 ·						
	05/08/03		Not Sample	ed - Well Reduction	n Program		1						
	07/25/03		· · · · · · · · · · · · · · · · · · ·	ed - Well Reduction			†						
•	11/21/03 NP	<50	<5.0	<5.0	<5.0	<150	1						
	11/21/03	<50	<5.0	<5.0	<5.0	<150	1						
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2						
	06/21/04			ed - Well Reduction		1	1						
	09/13/04		.	ed - Well Reduction			1						
	12/20/04		<u></u>	ed - Well Reduction			1						
	03/07/05	<25	<25 <2.0 ,2.0 <2.0 <500										
•	05/16/05	120		ed - Well Reduction		1000	1						
	09/13/05	<25	<2.0	<2.0	<2.0	<500	-						
MW-15	08/22/00 NP	<13,000	<1,300	<1,300	<1,300		1						
	11/14/00 ^{NP}	8,500	<500	<500	<500		'						
	02/06/01 ^{NP}	4,400	<500	<500 <500	<500								
	05/08/01 NP	16,000	<630	<630	<630	ja dose o la co rro ceró la cole. Estas Adolfana Dirigidades el							
	07/16/01 NP	8,100	<400	<400	<400								
	10/09/01 NP	<12,000				 de jesel igterij holkei sofficielense 	1						
	01/28/02 NP	700 700 70	<2,500	<2,500	<2,500		4						
		3,600	<620	<620	<620	e l'est d'un dist it icé l'All Qui Tommonia de la assertation	4						
	04/17/02 NP	<5,000	<1,000	<1,000	<1,000		-						
	07/09/02	Not Sampled - Well Reduction Program											
45546556	10/21/02	Not Sampled - Well Reduction Program											
	02/21/03	Not Sampled - Not Accessible											
udala akt	05/08/03	Not Sampled - Well Reduction Program											
	07/25/03		Not Sampled - Well Reduction Program										
rate att	11/21/03		Not Sampled - LPH Sheen										
	02/25/04	51,000	<2,000	<2,000	<2,000	<60,000	2						
	06/21/04			ed - Well Reduction			4						
	09/13/04			ed - Well Reduction			1						
	12/20/04			ed - Well Reduction			1						
Mikkati	03/08/05	anyani i Digalifati.		alyzed - Suspect :		Andreas III dest 4787							
	05/16/05			ed - Well Reduction			1						
	09/13/05	63,000	<400	<400	<400	<100,000							
MW-16	08/22/00 NP	<4,000	<400	<400	<400	let ive] 1						
	11/14/00 NP	<2,000	<40	<40	<40		<u> j</u>						
	02/06/01 NP	4,200	<400	<400	<400	P.A.	_						
	05/08/01 ^{NP}	2,900	<250	<250	<250] .						
	07/16/01 ^{NP}	<2000	<400	<400	<400		_						
	10/09/01 ^{NP}	<5,000	<1,000	<1,000	<1,000								
	01/28/02 NP	<2,000	<400	<400	<400								
	04/17/02 ^{NP}	<2,500	<500	<500	<500								
	07/09/02		Not Sampl	ed - Well Reduction	n Program		7						
	10/21/02 NP	<5,000	<500	<500	<500	мр	1						
	02/21/03 NP	<5,000	<500	<500	<500	<15,000	7						
	05/08/03	· '		ed - Well Reduction			1						
	07/25/03			ed - Well Reduction			1						

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

All Results Reported in Micrograms per Liter (µg/L)

11/21/03 NP 11/21/03 02/25/04 06/21/04 09/13/04 12/20/04	<2,500 <5,000 <5,000	<250 <500	<250	<250	7.500					
02/25/04 06/21/04 09/13/04 12/20/04		<500		~	<7,500	1				
06/21/04 09/13/04 12/20/04	<5,000		<500	<500	<15,000					
09/13/04 12/20/04		<500	<500	<500	<15,000	2				
12/20/04	ì	Not Samp	led - Well Reductio	n Program						
12/20/04			oled - Well Reductio							
· · · · · · · · · · · · · · · · · · ·										
03/08/05 Not Analyzed - Suspect Sample										
05/16/05		Not Samp	oled - Well Reduction	n Program		'				
09/12/05		Not Sampled - Well Reduction Program								
08/22/00 NP	<2,500	<250	<250	<250		1				
			+	aller a la la la la la la la la la la la la l						
	<500					1				
					<1.500	1				

	<500		The second second		<1.500	1				
						1				
				- 1		2				
	(municipal particular									
	360		_		<1.200					
					<u></u>	1				
			_			1				
05/08/01 NP	*****					1				
						1				
	·				t	1				
						1				
						1				
						1				
	·				<6.000	1				
					 	1				
			_			1				
						1				
			_			1				
	· ·		-			2				
						•				
·						1				
						1				
	11/14/00 NP 02/06/01 NP 05/08/01 NP 07/16/01 NP 10/09/01 NP 01/28/02 NP 04/17/02 NP 02/21/03 NP 11/21/03 NP 11/21/03 NP 11/21/04 NP 02/25/04 06/21/04 03/08/05 05/16/05 09/13/05 08/22/00 NP 11/14/00 NP 02/06/01 NP 02/06/01 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/28/02 NP 01/21/02 NP 02/21/03 NP 07/09/02 NP 11/21/03 NP 05/08/03 NP 07/25/03 NP 07/25/03 NP 01/21/02 NP 02/21/03 NP 01/25/03 NP 01/25/03 NP 01/25/03 NP	02/06/01 NP <2,000	02/06/01 NP <2,000	02/06/01 NP <2,000	02/06/01 NP	02/06/01 NP < 2,000				

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

All Results Reported in Micrograms per Liter (µg/L)

Well Identification	Sampling Date	ТВА	DIPE	ETBE	TAME	ETHANOL	Sourc
MW-18	03/07/05	1,800	<5.0	<5.0	<5.0	<1,200	2
cont'd	05/16/05	<2,500	<200	<200	<200	<50,000	
	09/12/05	3,000	<100	<100	<100	<25,000	
MW-19A	08/22/00 NP	<130	<13	<13	<13	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1
	11/14/00 NP	<63	<13	<13	<13		
	02/06/01 NF	30	<5.0	<5.0	<5.0		
	05/08/01 ^{NP}	41	<5.0	<5.0	<5.0		
	07/16/01 NP	<25	<5.0	<5.0	<5.0		
	10/09/01 ^{NP}	<250	<50	<50	<50		
	01/28/02 ^{NP}	<25	<5.0	<5.0	<5.0		
	04/17/02 ^{NP}	<25	<5.0	<5.0	<5.0		
	07/09/02 NP	<25	<5.0	<5.0	<5.0		
	10/21/02 NP	<50	<5.0	<5.0	<5.0		
dett 481:	02/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150	
	05/08/03 ^{NP}	<25.0	<1.00	<1.00	<1.00	<50.0	
	07/25/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150	
	11/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150	
Nësaki k	11/21/03	<50	<5.0	<5.0	<5.0	<150	
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2
	06/21/04	<50	<5.0	<5.0	<5.0	<150	
	09/13/04	<50	<5.0	<5,0	<5.0	<150	
	12/20/04	<25	<2.0	<2.0	<2.0	<500	
	03/07/05	<25	<2.0	<2.0	<2.0	<500	
	05/16/05	<25	<2.0	<2.0	<2.0	<500	
	09/12/05	<25	<2.0	<2.0	<2.0	<500	
MW-19B	08/22/00 NP	<250	<25	<25	<25		1
	11/14/00 NP	<130	<25	<25	<25		
	02/06/01 NP	<130	<25	<25	<25		-
	05/08/01 NP	<310	<63	<63	<63		
	07/16/01 NP	<2,500	<500	<500	<500		
	10/09/01 NP	<2,000	<400	<400	<400	₩₩	
	01/28/02 NP	<100	<20	<20	<20		
	04/17/02 ^{NP}	<120	<25	<25	<25	nn nn	
	07/09/02 ^{NP}	<120	· <25	<25	<25		
	10/21/02 NP	<500	<50	<50	<50		
	02/21/03 ^{NP}	<500	<50	<50	<50	<1,500	
	05/08/03 ^{NP}	<25.0	<1.00	<1.00	<1.00	<50.0	
	07/25/03 ^{NP}	<500	<50	<50	<50	<1,500	
	11/21/03 NP	<500	<50	<50	<50	<1,500	
	11/21/03	<1,000	<100	<100	<100	<3,000	
	02/25/04	<1,000	<100	<100	<100	<3,000	2
	06/21/04	<1,000	<100	<100	<100	<3,000	
	09/13/04	<1,000	<100	<100	<100	<3,000	
	12/20/04	<120	<10	<10	<10	<2,500	
	03/08/05	<620	<50	<50	<50	<12,000	
	05/16/05	<620	<50	<50	<50	<12,000	
	09/12/05	<420	<33	<33	<33	<8,300	
MW-20	08/22/00 NP	<250	<25	<25	<25	20,000 24.55 . _ 20.5544	1
	11/14/00 NP	<130	<25	<25	<25 <25		'
Matalani (2002)	02/06/01 NP	<250	<50	<50	<50		

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

All Results Reported in Micrograms per Liter (µg/L)

Well Identification	Sampling Date	ТВА	DIPE	ETBE	TAME	ETHANOL	Source						
MW-20	05/08/01 NP	<250	<50	<50	<50		1						
cont'd	07/16/01 NP	<250	<50	<50	<50								
	10/09/01 NP	<500	<100	<100	<100								
	01/28/02 NP	<25	<5.0	<5.0	<5.0								
	04/17/02 NP	<25	<5.0	<5.0	<5.0								
	07/09/02		·										
	10/21/02 NP	<50	<5.0	<5.0	<5.0								
	02/21/03 NP	<50	<5.0	<5.0	<5.0	<150							
	05/08/03		Not Samp	led - Well Reducti	on Program								
	07/25/03 NP	<50	<5.0	<5.0	<5.0	<150]						
	11/21/03 NP	<50	<5.0	<5.0	<5.0	<150							
	11/21/03	<50	<5.0	<5.0	<5.0	<150							
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2						
	06/21/04		Not Sampled - Well Reduction Program										
	09/13/04		Not Samp	led - Well Reducti	on Program		1						
	12/20/04		Not Samp	led - Well Reducti	on Program	· · · · · · · · · · · · · · · · · · ·	1						
	03/08/05	<25	<2.0	<2.0	<2.0	<500	1						
	05/16/05		Not Sampled - Well Reduction Program										
	09/12/05	*.		led - Well Reducti			1						
MW-21	08/22/00 NP	<1,300	<130	<130	<130		1						
	11/14/00 NP	<630	<130	<130	<130		1						
	02/06/01 ^{NP}	<250	<50	<50	<50								
	05/08/01 NP	<250	<50	<50	<50		-						
	07/16/01 NP	<120	<25	<25	<25		<u>-</u>						
	10/09/01 NP	<1,200	<250	<250	<250		1						
	01/28/02 NP	<250	<50	<50	<50								
	04/17/02 NP	<120	<25	<25	<25								
	07/09/02			oled - Well Reducti		Nis de Horse							
	10/21/02 NP	<500	<50	<50	<50								
	02/21/03 ^{NP}	<250	<25	<25	<25	<750							
	05/08/03			oled - Well Reducti	4		1						
	07/25/03 NP	<250	<25	<25	<25	<750	1						
	11/21/03 NP	<500	<50	<50	<50	<1,500							
	11/21/03	<500	<50	<50	<50	<1,500	1						
	02/25/04	<500 <500	<50	<50	<50	<1,500	2						
	06/21/04			oled - Well Reducti	The second secon		_						
	09/13/04			oled - Well Reducti		anno e la colonia a la glace de la la colonia de la colonia de la colonia de la colonia de la colonia de la co Porticiona de la colonia de la colonia de la colonia de la colonia de la colonia de la colonia de la colonia d	-						
	12/20/04	applicapterna acrosswae Viloshake kii sarastati		oled - Well Reducti		<u>n managa, an ang atawa.</u> Ing pagalang atawa	4						
	03/08/05	<620	<50	<50	on, rogram 	<12,000	<u>:</u>						
		\$020		oled - Well Reducti		12,000	! 						
effektiselli vanduvid. Engliselli selli end	05/16/05	d optostaci prámie i opii. Nomenio implicación de la composita		oled - Well Reduct			1						
100.00	09/12/05 08/22/00 ^{NP}	Tallinia totaliaka		<5.0	<5.0	TOTAL PORT ART OF BRIDE	1						
MW-22		<50	<5.0				┥ '						
	11/14/00 NP 02/06/01 NP	27	<5.0	<5.0	<5.0		┨						
		26	<5.0	<5.0	<5.0		-						
	05/08/01 NP	<25	<5.0	<5.0	<5.0		4						
	07/16/01 NP	<25	<5.0	<5.0	<5.0		-1						
	10/09/01 NP	<25	<5.0	<5.0	<5.0		-						
	01/28/02 NP	<25	<5.0	<5.0	<5.0		4						
	04/17/02 NP	<25	<5.0	<5.0	<5.0		-						
	07/09/02 NP	<25	<5.0	<5.0	<5.0								

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

All Results Reported in Micrograms per Liter (μg/L)

Well Identification	Sampling Date	ТВА	DIPE	ETBE	ТАМЕ	ETHANOL	Source				
MW-22	10/21/02 NP	<50	<5.0	<5.0	<5.0		1				
cont'd	02/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150					
	05/08/03 ^{NP}	<25.0	<1.00	<1.00	<1.00	<50.0					
	07/25/03 ^{NP}	<50	< 5.0	<5.0	<5.0	<150					
į	11/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150					
	11/21/03	170	<5.0	<5.0	<5.0	<150					
	02/25/04	160	<5.0	<5.0	<5.0	<150	2				
	06/21/04	91	<5.0	<5.0	<5.0	<150					
	09/13/04	110	<5.0	<5.0	<5.0	<150	}				
ļ	12/20/04	150	<2.0	<2.0	<2.0	<500					
	03/07/05	200	<2.0	<2.0	<2.0	<500					
_	05/16/05	98	<2.0	<2.0	<2.0	<500					
	09/12/05	860	2.1	< 2.0	<2.0	<500					
MW-23	08/22/00 ^{NP}	<50	<5.0	<5.0	<5.0		1				
	11/14/00 NP	<25	<5.0	<5.0	<5.0						
	02/06/01 ^{NP}	<25	<5.0	<5.0	<5.0						
	05/08/01 ^{NP}	<25	<5.0	<5.0	<5,0						
	07/16/01 NP	<25	<5.0	<5.0	<5.0						
	10/09/01 ^{NP}	<25	<5.0	<5.0	<5.0	<u> </u>					
	01/28/02 ^{NP}	<25	<5.0	<5.0	<5.0						
	04/17/02 ^{NP}	<25	<5.0	<5.0	<5.0	francis i gibias					
	07/09/02	07/09/02 Not Sampled - Well Reduction Program									
	10/21/02 NP	<50	<5.0	<5.0	<5.0						
	02/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150					
	05/08/03	Not Sampled - Well Reduction Program									
	07/25/03	Not Sampled - Well Reduction Program									
	11/21/03 ^{NP}	<50	<5.0	<5.0	<5.0	<150					
	11/21/03	<50	<5.0	<5.0	<5.0	<150					
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2				
	06/21/04		Not Sampl	ed - Well Reduction	n Program						
	09/13/04		Not Sampl	ed - Well Reductio	n Program						
	12/20/04		Not Sampl	ed - Well Reduction	n Program						
	03/07/05	<25	<2.0		<2.0	<500					
	05/16/05		Not Sampl	ed - Well Reduction	n Program						
	09/12/05			ed - Well Reduction							
MW-24	11/21/03 NP	<500	<50	<50	<50	<1,500	1				
ſ	11/21/03	<250	<25	<25	<25	<750	_				
Ī	02/25/04	<250	<25	<25	<25	<750	2				
Ī	06/21/04	<250	<25	<25	<25	<750°	_				
ľ	09/13/04	<250	<25	<25	<25	<750					
ľ	12/20/04	<62	<5.0	<5.0	<5.0	<1,200					
ľ	03/08/05	<25	<1.0	<2.0	<2.0	<500					
ļ	05/16/05	88	<2.0	<2.0	<2.0	<500					
-	09/12/05	120	<2.0	<2.0	<2.0	<500					

SUMMARY OF ADDITIONAL OXYGENATES ANALYTICAL RESULTS ARCO Facility #1919

All Results Reported in Micrograms per Liter (µg/L)

Well Identification	Sampling Date	ТВА	DIPE	ETBĖ	ТАМЕ	ETHANOL	Source				
MW-25	11/21/03 NP	<1,000	<100	<100	<100	<3,000	1				
	11/21/03	<1,000	<100	<100	<100	<3,000					
	02/25/04	<1,000	<100	<100	<100	<3,000	2				
	06/21/04	06/21/04 Not Sampled - Inaccessible									
	09/13/04	310	<10	<10	<10	<300					
	12/20/04	460	<2.0	<2.0	<2.0	<500					
	03/08/05	330	<2.0	<2.0	<2.0	<500					
	05/16/05	480	<2.0	<2.0	<2.0	<500					
	09/12/05	210	<2.0	<2.0	<.20	<500					
MW-26	11/21/03 NP	<50	<5.0	<5.0	<5.0	<150	1				
	11/21/03	<50	<5.0	<5.0	<5.0	<150					
	02/25/04	<50	<5.0	<5.0	<5.0	<150	2				
	06/21/04	<50	<5.0	<5.0	<5.0	<150					
	09/13/04	<50	<5.0	<5.0	<5.0	<150					
	12/20/04	<25	<2.0	<2.0	<2.0	<500					
	03/07/05	<25	<2.0	<2.0	<2.0	<500]				
	05/16/05	<25	<2.0	<2.0	<2.0	<500					
	09/12/05	<25	<2.0	<2.0	<2.0	<500]				

Notes:

TBA = Tert-butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = tert-Amyl methyl ether

< = Less than indicated laboratory reporting limit

Samples collected by no-purge procedures, and analyzed by EPA Method 8260B.

Sources:

- 1 SECOR International Incorporated, 2004, ARCO Groundwater Remediation Report [Fourth-2003], dated January 30, 2004.
- 2 SECOR International Incorporated, 2005, ARCO Groundwater Monitoring Report [Third-2005], dated October 15, 2005.

TABLE 5

SUMMARY OF BASELINE NATURAL ATTENUATION DATA ARCO Facility #1919 660 Via de la Valle, Solana Beach, CA

Well		Petroleun	ı Hydrocar	bon Concer	ntrations	HERMINE				Indic	cators of Na	atural Atter	nuation and	d General G	roundwater	Parameters			
Identificat	GRO	В	T		X	MTBE	DO	Nitrate	Felli	FeII	Sulfate	Sulfide	Methane	Ammonia	Total Alkalinity	ORP	S Cond	рΗ	Temp
ion			μç	y/L						ihaa, ka	μ	g/L				(m <u>V)</u>	(mS/cm)		(°C)
MW-14	<100	<0.50	<0.50	<0.50	<1.0	<1.0	0.63/2.92	911	4,160	<200	263,000	<100	<1.0	<100	196,000	-42/28.1	3.221/2.478	7.78/7.70	22.32/22.80
MW-15	9,200	1,700	<100	170	<200	16,000	0.27/0.78	<100	8,670	<200	641,000	5,530	3,500	740	1,410,000	-277.5/-118.3	4.391/4.783	8.69/8.71	25.03/25.23
MW-17	790	130	3.1	70	27	150	0.29/0.32	1,610	4,070	678	647,000	<100	410	361	534,000	-94.0/-14.7	2.254/6.781	7.93/7.21	23.25/22.85
MW-18	740	<25	<25	<25	<50	4,300	0.23/0.40	<100	29,400	<200	440,000	1,530	400	714	702,000	-16.4/-248.9	4.157/4.687	7.76/9.11	23.97/23.16
MW-19B	4,700	40	190	1,000	640	<17	0.24/0.86	111	5,570	258	181,000	114	690	644	716,000	-268.5/-117.8	2.400/2.344	8.84/8.64	24.06/24.30
MW-24	<100	<0.50	<0.50	<0.50	<1.0	27	0.43/0.34	<100	18,300	<200	692,000	154	340	1,970	699,000	-106.7/-196.6	5.260/9.020	7.66/8.66	27.23/24.90
MW-25	<100	<0.50	<0.50	<0.50	<1.0	1.9	0.27/0.70	<100	38,000	2860	509,000	158	330	5,190	685,000	-98.3/-87.8	4.465/5.570	7.76/7.58	26.09/24.66
MW-26	<100	<0.50	<0.50	<0.50	<1.0	<1.0	7.03/6.99	17,500	17,200	<200	500,000	159	2.4	<100	417,000	2.6/34.9	2.395/2.828	7.95/8.34	21.20/21.21

Notes:

Samples for GRO, BTEX, and MTBE were collected on September 1 2, 2005.

Samples for indicators of natural attenuation and general groundwater parameters were collected on September 12, 2005.

GRO = Gasoline range organics C6-C12 (DHS-Modified EPA Method 8015)

BTEX = Benzene, toluene, ethylbenzene, and total xylenes (EPA Method 8260B)

MTBE = Methyl tert-butyl ether (EPA Method 8260B)

DO = Dissolved oxygen (field measurement - pre & post purge)

Nitrate = Nitrate as nitrogen (EPA Method 300.0)

Fe III = Ferric iron (laboratory calculation)

Fe II = Ferrous iron (EPA Method 6010B-Diss)

Sulfate = Sulfate (EPA Method 300.0)

Sulfide = Sulfide (EPA Method 376.2)

Methane = Methane (EPA Method RSK-175 Mod)

Ammonia = Ammonia (EPA Method 350.3)

Alkalinity = Alkalinity as calcium carbonate (CaCO3) (EPA Method 310.1)

ORP = Oxidation-reduction potential (field measurement - pre & post purge)

S Cond = Specific conductivity (field measurement - pre & post purge)

pH = pH (field measurement - pre & post purge)

Temp = Temperature (field measurement - pre & post purge)

μg/L = Micrograms per Liter

mg/L = Milligrams per Liter

mV = Millivolts

mS/cm = millisiemens per centimeter

oC = Degrees celcius

< = Below indicated laboratory reporting limit

NS = Not sampled

NM = Not measured

TABLE 6

CONTAMINANT CHARACTERISTICS ARCO Facility #1919

										EPA Re	EPA Region 9 Preliminary Remediation Goals (4)				
Compound/ Chemical	CAS#	Molecular Weight	Pure Phase Solubility ^(1,2) (mg/L)	log Koc ^(1,2) (log l/kg)	Vapor Pressure ^(1,2) (mm Hg)	Henry's Law Constant (1.2) (dimensionless)	Flash Point ^(1,2) (C)	Boiling Point ^(1,2) (C)	State of California Drinking Water MCL ⁽³⁾ (µg/L)	Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (µg/m^3)	Tap Water (µg/L)		
Gasoline	8006-61-9	~ 95	NA	NA	NA	NA	-45.6	32-225	NA	NA NA	NA	NA	NA		
Benzene	71-43-2	78.11	1780	1.79	76 - 95.2	0.23	-11	80.1	0.001	0.64	1.4	0.25	0.35		
methyl tert-butyl ether (MTBE)	1634-04-4	88.15	43,000-54,300	1.0-1.1	245-256	0.024	-28	55.2	0.013	32	70	7.4	11		
tert-butanol (TBA)	75-65-0	74.12	Miscible	1.57	40-42	0.00048-0.00059	4	82.2	NA NA	, NA	NA	NA	NA		
tert-amyl methyl ether (TAME)	994-05-8	102.18	20,000	1.3-2.2	68.3	0.052	-11	85-86	NA	: NA	NA	NA	NA		

Notes:

μg/L

micrograms per liter

mg/kg

milligrams per kilogram

μg/m/3

micrograms per cubic meter

mm Hg

temperature in degrees Celsius pressure in millimeters of mercury

log I/kg

a measure of the propensity of a compound to adsorb onto carbon in the soil matrix

Koc

soil sorption coefficient

MCL

California Maximum Contaminant Level in groundwater promulgated by California Environmental Protection Agency (CalEPA)

Pure Phase Solubility - The tendency of a chemical to dissolve in water, expressed as milligrams of a chemical that will dissolve in one liter of water.

Soil sorption coefficient (log Koc) - The tendency of a chemical to adsorb to soil, expressed as the ratio of a chemical that will adsorb onto organic carbon to the concentration of the chemical that dissolves in water; Vapor pressure – The tendency of a chemical to migrate from a pure liquid phase to a gas phase, expressed as the pressure exerted by a chemical in the gas phase when it is in equilibrium with the liquid phase.

Henry's law constant — The tendency of a chemical to partition between the dissolved phase and the gas phase, expressed as the ratio of the equilibrium concentration of the chemical in water.

- (1) Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates, 2000, California State Water Resources Control Board, Final Draft, 3/27/00
- (2) San Diego County, Department of Environmental Health, Site Assessment and Mitigation Program, Vapor Risk Model, http://www.co.san-diego.ca.us/deh/lwq/sam/docs/vapor_risk-2000_rev-08-25-2003.xls
- (3) A Compilation of Water Quality Goals, California Environmental Protection Agency, Regional Water Quality Control Board, Central Valley Region, August 2000
- (4) U.S. Environmental Protection Agency, Region 9 Preliminary Remediation Goals, http://www.epa.gov/region09/waste/sfund/prg/files/04prgtable.pdf dated October 2004. These goals assume direct exposure to the contaminants.

Table 7 Remedial Technology Screening Matrix ARCO Facility #1919 660 Via de la Valle. Solana Beach, CA

	Technology		Retained	Comments
1.	Pump-and-Treat	Conventional pump-and-treat methods involve pumping contaminated groundwater to the surface for treatment. Treated groundwater is then discharged or re-injected to the aquifer. Pump-and-treat systems are used primarily to accomplish hydraulic containment and/or to reduce the dissolved contaminant concentrations in the aquifer to meet cleanup objectives.	Yes	Applicable technology for groundwater plume migration control and dissolved-phase mass reduction.
2.	Excavation and Off-Site Disposal	Excavation removes contaminated material from a hazardous waste site using heavy construction equipment, such as backhoes, bulldozers, and front loaders. At certain sites, specially designed equipment may be used to prevent the spread of contaminants. The excavated material is commonly landfilled at an approved off-site disposal facility, but can also be remediated on site and reused.	Yes	Technically feasible method to address source mass in vadose zone and capillary fringe soils. Very difficult to implement since remaining source mass is at edge of site extending below busy intersection.
3.	Soil Vapor Extraction (1)	Soil vapor extraction (SVE), also known as "soil venting" or "vacuum extraction", is an <i>in situ</i> remedial technology that reduces concentrations of volatile constituents in petroleum products adsorbed to soils in the unsaturated (vadose) zone. In this technology, a vacuum is applied through wells near the source of contamination in the soil. Volatile constituents of the contaminant mass "evaporate" and the vapors are drawn toward the extraction wells. Extracted vapor is then treated as necessary before being released to the atmosphere. The increased air flow through the subsurface can also stimulate biodegradation of some of the contaminants, especially those that are less volatile. Wells may be either vertical or horizontal. In areas of high groundwater levels, water table depression pumps may be required to offset the effect of upwelling induced by the vacuum.	Yes	SVE has been used previously at site to address vadose zone impact and recover air sparging off gas.
4.	Dual-Phase Extraction (1)	Dual-phase extraction (DPE), also known as multi-phase extraction, vacuum-enhanced extraction, or sometimes bioslurping, is an in-situ technology that uses pumps to remove various combinations of contaminated groundwater, separate-phase petroleum product, and hydrocarbon vapor from the subsurface. Extracted liquids and vapor are treated and collected for disposal, or re-injected to the subsurface (where permissible under applicable state laws).	Yes	Technically feasible. Could address source mass and groundwater plume migration control.
5.	Air Sparging w/ Soil Vapor Extraction (1)	Air sparging is an <i>in situ</i> remedial technology that reduces concentrations of volatile constituents in petroleum products that are adsorbed to soils and dissolved in groundwater. This technology, which is also known as " <i>in situ</i> air stripping" and " <i>in situ</i> volatilization," involves the injection of contaminant-free air into the subsurface saturated zone, enabling a phase transfer of hydrocarbons from a dissolved state to a vapor phase. The air is then vented through the unsaturated zone. Air sparging is most often used together with soil vapor extraction (SVE), but it can also be used with other remedial technologies. When air sparging (AS) is combined with SVE, the SVE system creates a negative pressure in the unsaturated zone through a series of extraction wells to control the vapor plume migration. This combined system is called AS/SVE.	Yes	Has been used previously at the site.
6.	In-Situ Enhanced Bioremediation (1)	In-situ groundwater bioremediation is a technology that encourages growth and reproduction of indigenous microorganisms to enhance biodegradation of organic constituents in the saturated zone. In-situ groundwater bioremediation can effectively degrade organic constituents which are dissolved in groundwater and adsorbed onto the aquifer matrix.	Yes	Technically feasible.
7.		Low-Temperature Thermal Desorption (LTTD), also known as low-temperature thermal volatilization, thermal stripping, and soil roasting, is an ex-situ remedial technology that uses heat to physically separate petroleum hydrocarbons from excavated soils. Thermal desorbers are designed to heat soils to temperatures sufficient to cause constituents to volatilize and desorb (physically separate) from the soil. Although they are not designed to decompose organic constituents, thermal desorbers can, depending upon the specific organics present and the temperature of the desorber system, cause some of the constituents to completely or partially decompose. The vaporized hydrocarbons are generally treated in a secondary treatment unit (e.g., an afterburner, catalytic oxidation chamber, condenser, or carbon adsorption unit) prior to discharge to the atmosphere. Afterburners and oxidizers destroy the organic constituents. Condensers and carbon adsorption units trap organic compounds for subsequent treatment or disposal. Some pre- and postprocessing of soil is necessary when using LTTD. Excavated soils are first screened to remove large (greater than 2 inches in diameter) objects. These may be sized (e.g., crushed or shredded) and then introduced back into the feed material. After leaving the desorber, soils are cooled, re-moistened to control dust, and stabilized (if necessary) to prepare them for disposal/reuse. Treated soil may be redeposited onsite, used as cover in landfills, or incorporated into asphalt.	No	Not enough room on site for this technology.

Table 8 Cost Estimate for Alternative 1 - Remediation by Natural Attenuation ARCO Facility #1919

Capital Equipment and Construction	
System Construction	\$0
System Start Up And Trouble Shooting	\$0
Total Cap/Const	\$0
<u>Drilling Costs</u>	
Number of Wells	0
Drillers Cost for Dual SVE/AS (\$/ft)	NA
Depth per Well	0
Permits	\$0
Consultant Fees	\$0
Total Drilling Costs	\$0
<u>Utility Costs</u>	
Total Motor HP	NA
Run Time (%)	NA
Power Cost (\$/kw-hr)	NA
Monthly Power Cost	NA
Monthly Utilities	\$0
O&M Costs	
Expected Duration (months)	NA
Monthly O&M (excluding Utilities)	\$0.00
Total O&M Costs (incl Utilities)	\$0
,	
System Decommissioning	\$0
<u> </u>	·
Total Cost	\$0

Table 9 Cost Estimate for Alternative 2 - Air Sparging with Soil Vapor Extraction ARCO Facility #1919

Capital Equipment and Construction	
200 cfm Cat-Ox	existing
10-HP Sparge Blower	existing
Misc. Parts	\$10,000
AS/SVE System Expansion to 12 New Wells	\$125,000
System Start Up And Trouble Shooting	\$6,000
Total Cap/Const	\$141,000
<u>Drilling Costs</u>	
Number of Dual AS/SVE Wells	12
Drillers Cost for Dual SVE/AS (\$/ft)	\$35
Depth per Well	20
Permits	\$1,974
Consultant Fees	\$7,500
Total Drilling Costs	\$17,874
<u>Utility Costs</u>	
Total Motor HP	20
Run Time (%)	100%
Power Cost (\$/kw-hr)	\$0.15
Monthly Power Cost	\$1,609.20
Natural Gas	\$1,500.00
Monthly Utilities	\$3,109
O&M Costs	
Expected Duration (months)	24
Monthly O&M (excluding Utilities)	\$2,300.00
Total O&M Costs (incl Utilities)	\$129,821
System Decommissioning	\$50,000
Total Cost	\$338,695

Table 10 Cost Estimate for Alternative 3 - In-Situ Chemical Oxidation ARCO Facility #1919

Capital Equipment and Construction	
Ozone Sparge System	\$45,000
System Construction	\$125,000
System Start Up And Trouble Shooting	\$6,000
Total Cap/Const	\$176,000
<u>Drilling Costs</u>	
Number of Ozone Sparge Wells	12
Drillers Cost for Dual SVE/AS (\$/ft)	\$25
Depth per Well	20
Permits	\$1,974
Consultant Fees	\$7,500
Total Drilling Costs	\$15,474
<u>Utility Costs</u>	
Total Motor HP	5
Run Time (%)	100%
Power Cost (\$/kw-hr)	\$0.15
Monthly Power Cost	\$402.30
Monthly Utilities	\$402
, 	
O&M Costs	
Expected Duration (months)	12
Monthly O&M (excluding Utilities)	\$2,000.00
Total O&M Costs (incl Utilities)	\$28,828
System Decommissioning	\$50,000
Total Cost	\$270,302

TABLE 11 EVALUATION MATRIX FOR REMEDIAL ALTERNATIVES ARCO FACILITY #1919

Evaluation Criteria	Alternative 1 – Remediation by Natural Attenuation (RNA)	Alternative 2 – Air Sparging (AS) with Soil Vapor Extraction (SVE)	Alternative 3 – In-Situ Chemical Oxidation (ISCO) using Ozone Sparging
Description of Alternative	Dissolved hydrocarbon plume is allowed to reach State Maximum Contaminant Levels by natural attenuation.	SVE will be used to remediate the unsaturated soil zone. Air sparging (AS) would be utilized to accelerate remediation of impacted soil. AS will remove dissolved contaminants, enhance SVE system effectiveness, and promote bioremediation.	Compressed air containing approximately 500 ppmv ozone is injected into sparge wells. The ozone/air mixture directly oxidizes hydrocarbons in the saturated zone and promotes biodegradation by increasing dissolved oxygen concentrations.
2. Level of Protection of Human Health, the Environment, and Beneficial Uses of Ground and Surface Waters	This alternative provides an adequate level of protection of human health, the environment, and beneficial uses of ground and surface waters. Implementation would not significantly increase the potential exposure of humans to hydrocarbon impacted soil and groundwater.	This alternative provides an adequate level of protection of human health, the environment, and beneficial uses of ground and surface waters. Implementation will slightly increase the potential exposure of humans and the environment through the extraction, treatment, and discharge of impacted groundwater and/or soil vapor. This potential exposure would be limited to a moderate time span and can be controlled by monitoring and proper training of construction and O&M personnel.	Same as Alternative 2
Reduction of Hydrocarbons	This alternative will reduce the concentration of contaminants dissolved in groundwater and adsorbed to soil in the saturated zone.	This alternative will reduce the concentration of contaminants below the site in the vadose and saturated zones.	Same as Alternative 2
Implementation and Operation	Easy to implement. No disruptions to business operations during implementation.	Moderately difficult to implement. Requires power/gas and construction/O&M of AS/SVE systems. Some disruption to local traffic and business operations for the site during installation and operation of the remediation system.	Moderately difficult to implement. Requires power and construction/O&M of ozone sparge system. Some disruption to local traffic and business operations for the site during installation and operation of the remediation system.

TABLE 11 (CONT.) EVALUATION MATRIX FOR REMEDIAL ALTERNATIVES ARCO FACILITY #1919

Evaluation Criteria	Alternative 1 – Remediation by Natural Attenuation (RNA)	Alternative 2 – Air Sparging (AS) with Soil Vapor Extraction (SVE)	Alternative 3 – In-Situ Chemical Oxidation (ISCO) using Ozone Sparging
5. Cost Effectiveness	Cost Estimate = \$0	Cost Estimate = \$338,695	Cost Estimate = \$270,302
6. Compliance with Regulatory Guidelines	This alternative can be implemented within regulatory guidelines.	This alternative can be implemented within regulatory guidelines.	This alternative can be implemented within regulatory guidelines.
7. Short Term Effectiveness	This alternative is effective in the short term because natural attenuation processes appear to be occurring.	This alternative is effective in the short term.	This alternative is effective in the short term.
Long Term Effectiveness	Effective in the long term.	Same as Alternative 1.	Same as Alternative 1.
9. Community Exceptance	The impact to the nearby community and population would be negligible.	Same as Alternative 1.	Same as Alternative 1.
10. Impacts on Water Conservation	This alternative would not impact water conservation either negatively or positively.	Same as Alternative 1.	Same as Alternative 1.

TABLE 12 **CONCENTRATION TREND ANALYSIS SUMMARY** ARCO Facility #1919

Well	Compound Evaluated	Max Contaminant Level - C _{MCL} (μg/L) ⁽¹⁾	Initial Max, Concentration - C ₀ (µg/L) ^{[2)}	Sampling Date for C ₀	Current Reference Date Used	Estimated Degradation Rate Constant - k (day-1)	Time to Reach MCL from C ₀ - t (days)	Current Elapsed Time from Date C ₀ Reported (days)	Estimated Time to Reach C _{MCL} from Current Reference Date (yrs)	
MW-16	Benzene	1	5,900	09/28/94	NA	0.0039	NA	NA	NA	Degradation rate estimated from full data set from MW-16, which was located outside of AS/SVE system influence.
MW-15	Benzene	1 · 1 ·	1,700	09/13/05	10/21/05	0.0039	1,907	38	5.12	Degradation rate from MW-16 applied to post- remediation maximum concentration in well MW-15 and used to estimate time to MCL.
MW-21	Benzene	1	490	03/08/05	10/21/05	0.0039	1,588	227	3.73	Degradation rate from MW-16 applied to post- remediation maximum concentration in well MW-21 and used to estimate time to MCL.
MW-16	МТВЕ	13	45,000	03/20/97	10/21/05	0.001	8,149	3,137	13.73	Degradation rate and time to MCL estimated from full data set from MW-16, which is located outside of AS/SVE system influence.
MW-18	MTBE ·	13	11,000	05/10/00	10/21/05	0.0006	11,235	1,990	25.33	Degradation rate and time to MCL estimated from full data set from MW-18, which is located outside of AS/SVE system influence.
MW-15	MTBE	13	16,000	09/13/05	10/21/05	0.001	7,115	38	19.39	Degradation rate from MW-16 applied to post- remediation maximum concentration in well MW-15 and used to estimate time to MCL.
MW-15	МТВЕ	13	16,000	09/13/05	10/21/05	0.0006	11,859	38	32.39	Degradation rate from MW-18 applied to post- remediation maximum concentration in well MW-15 and used to estimate time to MCL.

Equation used to estimate time to reach MCL is $C = C_0e^{-\kappa t}$, where: Notes:

> C = Concentration at time t C₀ = Initial Concentration

k = Degradation rate constant (time⁻¹)

NA = Not applicable. Benzene not detected at laboratory reporting limits.

State of California Primary Maximum Contaminant Level (MCL) for Drinking Water (1)

Recent maximum concentration from post-remediation groundwater monitoring data

APPENDIX A BORING/WELL LOGS

CORRECTIVE ACTION PLAN
ATLANTIC RICHFIELD COMPANY
ARCO Facility #1919
660 Via de la Valle
Solana Beach, California
SAM Case #H05166-002
SECOR PROJECT NO. 08BP.01919.07
October 21, 2005

Logged By:		Date	Drilled	l:	Drillin	ng Contractor:	Me	thod/Equipmen	t:		Bor	ing Number:
Lori Guthrie	L	10-1	2-92		Tri-Co	ounty Drilling	Rin	g Sampler 2 Simco 4000	5"		.!	B1
See "Legend to Logs" for sampling method, classifications and laboratory test meth	ods	Diaim	oring .(in.): 5.5	E	Ground Elev.(ft.):	Groundwater Elevation Observed 8 fe	on (ft.):			Driv Wt.(lb: 140	s.):	Drop Dist.(in.):
Well Construction	Depth, (ft.)	Sample Type	Blows/Foot			Description				Sample No	Hnu Readings	Other Tests
	5 — 10 — 15 —		29 50 15 28 50	PLULU:	(SP) SAN yell gray to n (SW) SAN ligh sort (SP) SAN yell coan oxid moi	PHALT (0-4"), no disterial D, fine to medium gradowish brown 10YR 6 by 5YR 6/2, moderated moist, dense to very dense to live brown 5YR 5 beta, moist, very dense flowish orange 10YR 6 are sand/very fine gradation, moderately so ist, very dense mg Depth = 10 feet be water observed at apx.	ained, pal /2 to yello y sorted, ense, mice e grained, /6, modera ained, dar 6/6, trace vel, some rted, very	e pwish damp aceous ately k very	-	B1-1		

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. 40007-037-01 Dat

Date 10-15-92

Log of Boring

Figure

A-1 (Sheet 1 of 1)

Logged By:	Dat	te Drillec	l:	Drillin	ng Contractor:	Me	thod/Equipment	::	Bor	ing Number:
Lori Guthrie	10	0-12-92	Tri-County Drilling Ring Sampler 2.5" Simco 4000			341		B2		
See "Legend to Logs" for sampling method classifications and laboratory test meth	Di	Boring am.(in.): 6.5		und (ft.):	Groundwater Elevation Not Observe	on (ft.):	Total Depth (ft.):	Driv Wt.(lb 140	s.):	Drop Dist.(in.):
Well Construction		Sample Type Blows/Foot			Description			Sample No	Hnu Readings	Other Tests
	10	28 15	(SI To Gre	P) SAN browdam P) SAN yell to we cem tal Borin oundwat OTE: Has sam coun interest to to cem auge	PHALT (0-4 inches); 7 inches) D, medium grained, 1 wn 5YR 4/5, moderat np D, medium grained, 1 lowish brown (10YR 5 well sorted, damp, ver nented Ing Depth = 7 feet bgs ter not encountered Tammer broke while ac apler from 5.5 to 6 fee nt of 15 not a true cou rval. Very difficult de 7 feet bgs; fragments mented sandstone The refusal at 7 feet bgs mented sandstone	moderate of the sorted and the sorte	oblive I, erate well	B2-1		

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. 40007-037-01

Date 10-15-92

Log of Boring

Figure

Logged By:	Date	Drilled	:	Drillin	g Cont	tractor:		thod/Equipment		Bori	ng Number:
Lori Guthrie		12-92		Tri-Co			1	g Sampler 2.5 Simco 4000			B3
See "Legend to Logs" for sampling method, classifications and laboratory test meth	1	Boring m.(in.): 6. 5	E	Ground (lev.(ft.):	Groun	Not Observe		Total Depth (ft.): 11	Driv Wt.(lb 140	s.):	Drop Dist.(in.): 30
Well Construction	Depth, (ft.) Sample Tube	lows			1	Description			Sample No	Hnu Readings	Other Tests
Soil Cuttings Backfilled with medium Bentonite Chips	10 —	22 22 26 50 50		(SM) Silty yelle mod (SP) SAN yelle (10) (SP) SAN Silty oran mod dense (SP) SAN Oran mod dense Groundwate NOTE: At the second	D, fin owish leratel rlayer SAN ige (1 st cowish ige (1 leratel se D, me on st, vering De ter not uger r	surface D, fine grained orange (10YR ly sorted, damp brown to very 2 - 10YR 8/2) vorange (10YR ly sorted, moist, ed sandy SILT D, fine grained 0YR 7/4), mode addium to coarse gray (5YR 7/2) 0YR 5/2) with sorted, damp edium grained, coderately sorted ly sorted ly sorted ly sorted encountered the encountered refusal at 11 feet better the sandstone	ained, pale pale orang with dark 6/6) oxida dense, so grayish erately son grained, to very pome oxid to moist, dark yellowd, damp to gs	ation, ome inted, oale ation, very wish	B3-1 B3-2	-	

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. 40007-037-01

Date 10-15-92

Log of Boring

DDO IECT	ARCO STATION 1919	
PROJECT: _	ANCO STATION 1919	RORING D

G DATE: __10/04/90

LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH

CONTINUOUS CORE SAMPLING BORING TYPE: 8-INCH HOLLOW-STEM AUGER

GEOLOGIST: J. MEYER/T. JUDY

La WI-BORING NUMBER: B-1

= sampling interval

= lower explosive limit

sample analyzed for hydrocarbons

Total Depth = 14 Feet

= ground water piezometric surface

LEL

DRILLING COMPANY: VALLEY WELL DRILLING

benzene

toluene

ethylbenzene

ND = not detected at laboratory detection limits
Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

= total xylenes

APPROXIMATELY 10 FEET FLEVATION: ABOVE MEAN SEA LEVEL

EPTH (feet)		MATERIAL ENCOUNTERED	USC
0 - -		THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
•			
·			
			ŀ
		Damp, olive black (5Y2/1), slightly coarse, fine- to medium-grained SAND. Sample B1-5. No CGI. TPH < 10 ppm.	SP
-5 ++	Ш	Dark stained pea gravel and conglomerate, 3-inch-thick interval at 5 feet below grade.	GP
			†
	i		
-			l
又			
		Saturated, pale yellow (5Y8/4) with dark brown oxidized staining, fine- to medium-grained SAND.	SP
 10 ++	낵	Sample B1-10. CGI > 100% LEL. TPH = 24,000 ppm.	
_			
	į.	Light gray (5Y7/1), fine- to medium-grained SAND.	SP
1	ĺ	Total Depth = 14 feet below grade.	
		Boring converted to Monitoring Well (MW-1). See Well Construction Diagram for details.	
_			
-			
		otal petroleum hydrocarbons pom = parts per million Pa	

PROJECT: ÁRCO STATION 1919	BORING DATE:10/04/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: 10-INCH HOLLOW-STEM AUGER

GEOLOGIST: J. MEYER/T. JUDY BORING NUMBER: B-2 /MW-Z

APPROXIMATELY 10 FEET

DEPTH (feet)	ı	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
- - - - - - - - - - - - - - - - - - -		3,3,3	THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches). Damp, dark yellowish brown (10YR3/6), slightly clayey, slightly silty, fine-grained SAND. Sample B2-5. CGI = 0 ppm. TPH < 10 ppm.	SP
- ▼		10,14,10	Moist, greenish gray (5GY8/1), silty, very fine-grained SAND. Sample B2-10. No CGI. TPH < 10 ppm.	SM
		3,4,7	Saturated, light brownish gray (10YR6/2), fine- to medium-grained SAND. No sample. No CGI.	SP
- - - - - NOTES: TPH TRPH B	= t	otal petroleum otal recoverabl	Total Depth = 17 feet below grade. Boring converted to Monitoring Well (MW-2). See Well Construction Diagram for details. hydrocarbons ppm = parts per million Parts per petroleum hydrocarbons CGI/TLV = combustible gas reading	age 1 of

toluene lower explosive limit sample analyzed for hydrocarbons
 ground water piezometric surface Total Depth = 17 Feet

PROJECT: ARCO STATION 1919	BORING DATE: _	10/04/90
----------------------------	----------------	----------

LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

BORING NUMBER: B-3 / MAJ -3 GEOLOGIST: J. MEYER/T. JUDY

APPROXIMATELY 10 FEET

DRILLING COMPANY: VALLEY WELL DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

DEPTH (feet)	ı	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
		3,2,3	Damp, dark brown (5YR2/5), silty, fine-grained SAND. Sample B3-5. CGI = 150 ppm. TPH < 10 ppm.	SM
-		2,4,5	Wet, dark brown (10YR3/3), silty, fine-grained SAND with some dark hydrocarbon staining. Sample B3-10. No CGI. Poor recovery. TPH = 12 ppm.	SM
			Saturated, greenish gray (5G6/1), fine- to medium-grained SAND. No sample recovery at 15 feet. No CGI.	SP
		14, 18	Saturated, gray (10YR5/1), fine- to coarse-grained SAND. No sample. No CGI. Total Depth = 18 feet below grade.	SP
NOTES: TPH	<u> </u>	otal petroleum	Boring converted to Monitoring Well (MW-3). See Well Construction Diagram for details. hydrocarbons ppm = parts per million cGI/TLV = combustible gas reading	Page 1 of 1

benzene

= toluene ethylbenzene totál xylenes

ND = not detected at laboratory detection limits
Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

= sampling interval

 lower explosive limit sample analyzed for hydrocarbons ground water piezometric surface

Total Depth = 18 Feet

PROJECT: ARCO STATION 1919	BORING DATE:	10/04/90
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660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

GEOLOGIST: J. MEYER/T. JUDY BORING NUMBER: B-4

APPROXIMATELY 10 FEET

DRILLING COMPANY: VALLEY WELL DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
	-		THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
	T			
5 ++ 	_1	1,1,1	Damp, pinkish gray (5YR7/2), fine- to medium-grained SAND. Sample B4-5. CGI = 200 ppm. TPH < 10 ppm.	SP
_ _ 				
-			Wet, brownish yellow (10YR6/6) with dark staining, slightly silty, fine- to	
_ 10 ++ 		1,2,2	medium-grained SAND. Sample B4-10. CGI = 100 ppm. TPH = 13 ppm.	SP
- -				
			Total Depth = 13 feet below grade. Boring completed by grouting to 1 foot below grade with bentonite grout, and	
			capped with concrete.	
-				
_				
NOTES: TPH	 _ = _!	total petroleum	hydrocarbons ppm = parts per million P	age 1 of 1

TRPH = total recoverable petroleum hydrocarbons

benzene

toluene

ethylbenzene total xylenes

- not detected at laboratory detection limits

Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

ppm = parts per million CGI/TLV = combustible gas reading = sampling interval

lower explosive limit

sample analyzed for hydrocarbons ground water piezometric surface

Total Depth = 13 Feet

PROJECT:	ARCO STATION 1919	BORING DATE:10/04/90
LOCATION: _	660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: 10-INCH HOLLOW-STEM ALICED

BORING NUMBER: B-5 / M 11 - 4 APPROXIMATELY 10 FEET GEOLOGIST: _J. MEYER/T. JUDY

DEPTH (feet	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
	+	9,21,25	Slightly moist, very pale brown (10YR8/4), with orange staining, fine- to medium-grained SAND with orange iron oxide staining. Sample B5-5. CGI = 5% LEL. TPH = 82 ppm.	SP
— —		10,11,7	Saturated, very pale brown (10YR8/4) with dark staining, fine- to medium-grained SAND. Sample B5-10. CGI = 50 ppm. TPH < ND.	· SP
			COBBLE layer at 12 feet.	
15 15 		None taken	Saturated, light gray (N7), fine- to medium-grained SAND. No sample. No CGI.	SP
			Total Depth = 17 feet below grade. Boring converted to Monitoring Well (MW-4). See Well Construction Diagram for details.	
B T E X ND We	- H = = = = = = = = = = = = = = = = = =	toluene ethylbenzene total xylenes not detected at ations are meas	hydrocarbons e petroleum hydrocarbons CGI/TLV = combustible gas reading = sampling interval LEL = lower explosive limit + + = sample analyzed for hydrocarbons \sqrt{V} = ground water piezometric surface aboratory detection limits ured to top of casing. s represent Munsell color code designations.	Page 1 of 1

PROJECT: ARCO STATION 1919	BORING DATE: 10/05/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: 10-INCH HOLLOW-STEM AUGER
GEOLOGIST:J. MEYER/T. JUDY	BORING NUMBER: B-6 /MW-5

APPROXIMATELY 10 FEET DRILLING COMPANY: _VALLEY WELL DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
-			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
- - - - - 5 ++		13,14,18	Slightly moist, light gray (5Y6/1), slightly silty, fine- to medium-grained SAND. Sample B6-5. CGI ≈ 6% LEL. TPH < 10 ppm.	SP
- - - - - - - 10 ++		11,14,11	Wet, light gray (5Y6/1) to brownish yellow (10YR6/6), slightly silty, fine- to medium-grained SAND. Sample B6-10. CGI = 100 ppm. TPH < 10 ppm.	SP
_ _ _ _				
		18,4/5*	Saturated, gray (5Y5/2), with orange staining, fine- to coarse-grained SAND. No sample. No CGI. Rounded COBBLES at 15 feet. Saturated, grayish green (5G5/2), clayey SILT.	sw ML
			Total Depth = 16 feet below grade. Boring converted to Monitoring Well (MW-5). See Well Construction Diagram for details.	ML
NOTES: TPH				

NOTES: TPH = total petroleum hydrocarbons ppm = parts per million CGI/TLV = combustible gas reading Page 1 of 1 TRPH = total recoverable petroleum hydrocarbons benzene = sampling interval = toluene LEL = lower explosive limit EX = ethylbenzene = sample analyzed for hydrocarbons total xylenes ground water piezometric surface = not detected at laboratory detection limits Well elevations are measured to top of casing. Characters in parentheses represent Munsell color code designations. Total Depth = 16 Feet

PROJECT: ARCO STATION 1919	BORING DATE: 10/05/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: 10-INCH HOLLOW-STEM AUGER
GEOLOGIST: _J. MEYER/T. JUDY	BORING NUMBER: B-7 / MW-6
	APPROXIMATELY 10 FEET ELEVATION: ABOVE MEAN SEA LEVEL

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
- -				
_				
		12,17,18	Slightly damp, grayish yellow green (5GY7/2), fine- to medium-grained SAND. Sample B7-5. TLV = 200 ppm. TPH < 10 ppm.	SP
5 ++ 				
_				
-				
- 又				
_	\dashv	9,12,17	Saturated, grayish yellow green (5GY7/2), fine- to medium-grained SAND. Sample B7-10. TLV = 200 ppm. TPH < 10 ppm.	SP
10 ++ -	丩	9,12,17	Sample 67-10. 1EV ± 200 ppm. 1PH < 10 ppm.	
_				
- 				
			Saturated, grayish green (5G5/2), clayey SILT.	ML
-			Total Depth = 14 feet below grade. Boring converted to Monitoring Well (MW-6).	
_			See Well Construction Diagram for details.	
-				
		ļ		
_				
-				

= total petroleum hydrocarbons ppm = parts per million CGI/TLV = combustible gas reading Page 1 of 1 TRPH = total recoverable petroleum hydrocarbons sampling interval
 lower explosive limit
 sample analyzed for hydrocarbons
 ground water piezometric surface = benzene = toluene ethylbenzene Total Depth = 14 Feet

ALION GEOSCIENCE

BORING LO		G
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PROJECT: ___ARCO STATION 1919 BORING DATE: 10/05/90

LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

GEOLOGIST: J. MEYER/T. JUDY BORING NUMBER: B-8 /MW.7

APPROXIMATELY 10 FEET

EPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
 •				
 5 ++		None taken	Moist, dark reddish brown (5YR3/3), pebbly, clayey, fine- to very coarse-grained SAND. Sample B8-5. No CGI. TPH = 2,400 ppm.	sw
•				
· 文 - ++	\prod	1,2,3	Damp, dark brown (10YR3/3), slightly pebbly, clayey SILT with abundant pyrite and white mica flakes. Very malleable. Sample B8-8. No CGI. TPH = 47 ppm.	ML
— 10		2,2,3	Damp, dark brown (5YR2/4), micaceous, slightly pebbly, clayey SILT. Sample B8-10. No CGI.	ML
— 15	I	2,3,3	Saturated, dark gray (N3), slight clayey, slightly silty, fine- to medium-grained SAND. Sample B8-15. No CGI.	SP
			COBBLE layer at 17 feet.	
_			Total Depth = 17 feet below grade. Boring Monitoring Well (MW-7). See Well Construction Diagram for details.	

sample analyzed for hydrocarbons
 ground water piezometric surface

Total Depth = 17 Feet

PROJECT: ARCO STATION 1919	BORING DATE:10/05/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: 10-INCH HOLLOW-STEM AUGER
GEOLOGIST: J. MEYER/T. JUDY	BORING NUMBER: B-9 / MAN & APPROXIMATELY 10 FEET

EPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USC
			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
-5 ++		4,7,13	Slight damp, greenish gray (5GY6/1), slightly silty, fine- to medium-grained SAND. Sample B9-5. No CGI. TPH < 10 ppm.	sw
_ ⊻ ++		9,13,9	Wet, greenish gray (5GY6/1) to white (N9), slightly silty, fine- to medium-grained SAND. Sample B9-9. TPH < 10 ppm.	SP
- 10				
– 15		60/6"	Damp, brownish yellow (10YR6/6), slightly clayey, silty, fine- to medium-grained SAND.	SM
_			Total Depth = 15 feet below grade. Boring was converted to Monitoring Well (MW-8). See Well Construction Diagram for details.	

TPH = total petroleum hydrocarbons
TRPH = total recoverable petroleum hydrocarbons

benzene = toluene ethylbenzene

 totál xylenes ND = not detected at laboratory detection limits
Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

ground water piezometric surface

ppm = parts per million CGI/TLV = combustible gas reading = sampling interval LEL = lower explosive limit = sample analyzed for hydrocarbons

Total Depth = 15 Feet

PROJECT:	ARCO STATION 1919	BORING DATE:	2/12/92

LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

BORING NUMBER: B-10 / M.W-10 GEOLOGIST: J. GOODMACHER

APPROXIMATELY 10 FEET ELEVATION: ABOVE MEAN SEA LEVEL

DRILLING COMPANY: A AND R DRILLING

DEPTH (feet)	1	BLOW COUNTS	MATERIAL ENCOUNTERED	USCS
		CONTINUOUS		
<u></u>		CORE	Asphaltic Concrete (4 inches).	
_		SAMPLING	Moist, reddish brown (2.5YR4/4), clayey, sandy GRAVEL (Fill).	SP
		İ		
			Damp, light olive gray (5Y6/2), medium-grained SAND.	SP
	\vdash	-	Dry, light gray (5Y6/2), medium-grained SAND.	1
			ion, ight gray (or one), medianing allied orato.	SP
		· /	BEGIN DRIVE SAMPLING	
— 5	NR			
 5	Т	1	Dry, light gray (5Y7/2), medium-grained SAND. TLV = 15 ppm.	SP
				
- ++		39, 19, 22	Dry, light yellowish brown (2.5Y6/2), cemented, fine- to medium-grained SAND. Dry, olive brown (2.5Y4/4), fine- to medium-grained SAND. Sample B10-6.5. TPH < 5 ppm.	SP
	Ш		Dry, white (2.5Y8/2), fine- to medium-grained SAND. TLV = 10 ppm.	SP
	П	10, 14, 17	grande (according to most of mission points)	
- ++	П		Damp, white (N8), medium- to coarse-grained SAND. Water on sampler.	SP
_ _ _ _	\vdash		Sample B10-8.5. No TLV. TPH < 5 ppm.	
		10, 14, 15		1
 10	11			1
<u> </u>	\vdash	19, 18, 13	Saturated, brownish yellow (10YR6/8), medium- to coarse-grained SAND.	SP
	$\ \cdot \ $	-		
	Ш		Saturated, light gray (N7), coarse-grained SAND.	1
		16, 32, 37	Saturated, brownish yellow (10YR6/6), slightly silty, very fine- to fine-grained SAND. Wet, gray (N5), slightly silty, fine-grained SAND.	SP
_	\vdash	40.04.00		
		18, 21, 30	Wet, olive yellow (2.5Y6/6), slightly silty, fine-grained SAND.	SP
-	П		Dama gray (NE) elighthy sithy fine grained SAND with some shalls	SP
15	П	18, 21, 31	Damp, gray (N5), slightly silty, fine-grained SAND with some shells. Sample B10-15.5. TLV = 20 ppm. TPH < 5 ppm.	SF
- ++				SP
_ _	Ш]	Damp, gray (N5), slightly silty, fine-grained SAND.] 5
_		8, 13, 19		SP
]	Wet, light olive brown (2.5Y6/2), slightly silty, fine-grained SAND.	٦٥٢
_	- -	16, 50/5"	Columbia de la colonia de la c	
-		10,000	Saturated, grayish brown (10YR5/2), slightly silty, fine-grained SAND.	SP
-	\vdash	18, 50/5"	Saturated, gray (N6), very coarse-grained SAND. Saturated, light gray (2.5Y7/2) and red (2.5YR4/6; in fractures), sitty, fine-grained	-SP_ SM
-		.0,000	ISAND.	SW
 20	┝┸	{	Total Depth = 20 feet below grade. Boring converted to Monitoring Well (MW-10). See Well Construction Diagram for details.	

	B = benzene T = toluene E = ethylbenzene X = total xylenes	e petroleum hydrocarbons laboratory detection limits	CGITLV =	= (= 1 = 2	parts per million combustible gas reading sampling interval lower explosive limit sample analyzed for hydrocarbons ground water piezometric surface no recovery	Pag	ge 1 of 1
1	Characters in parenthese	s represent Munsell color code d	lesignations.		Total Dept	h = 3	20.0 Feet

PROJECT: ARCO STATION 1919	BORING DATE:	02/12/92
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LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

GEOLOGIST: J. GOODMACHER BORING NUMBER: B-11 /M (A - ()

APPROXIMATELY 10 FEET ELEVATION: ABOVE MEAN SEA LEVEL

DRILLING COMPANY: A AND R DRILLING

DEDTU (600) . RIOW						
DEPTH (feet)	1	BLOW COUNTS	MATERIAL ENCOUNTERED	USCS		
1			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (6 inches).			
- .			Moist, reddish brown (2.5YR 5/4), clayey, gravelly SAND (Fill).	SP		
_						
_		12, 39, 41	Damp, brownish yellow (10 YR 6/8), slightly silty, fine-grained SAND.	SP		
<u>-</u> 5	\perp		Damp, light gray (N7), fine- to medium-grained SAND. Sample B11-5.0. TLV = 50 ppm.	SP		
_	ì					
_ ++	\dashv	7, 32, 38	Damp, light gray (10YR7/1), slightly silty, fine-grained SAND. Sample B11-7.0.	SP		
			Damp, pink (7.5YR7/4), fine- to medium-grained SAND, with oxidized zones. Sample B11-8.0. TLV = 0 ppm.	SP		
-	\prod	10, 17, 26	Damp, dark brown (7.5YR4/2), fine- to medium-grained SAND. Wet, pink (7.5YR7/4), fine- to medium-grained SAND.	SP		
<u> </u>	Щ	7 10 00	Saturated, pink (7.5YR7/4), fine- to medium-grained SAND. Saturated, gray (N5), silty, fine-grained SAND. Sample B11-9.5. TPH < 5 ppm.	SP		
_		7, 18, 36	Saturated, reddish yellow (7.5YR6/6), slightly sitty, fine-grained SAND. Rock in sampler.	SP		
-	4	10.04.50	Saturated, grayish brown (10YR5/2), slightly silty, medium- to coarse-grained SAND.	SP		
_ ++		18, 34, 50	Saturated, grayish brown (10YR5/2), slightly silty, medium- to coarse-grained SAND. Sample B11-12.5. TPH < 5 ppm.	SP		
<u> </u>	1		Damp, brownish yellow (10YR6/6), silty, very fine- to fine-grained SAND. Sample B11-12.5. TLV = 20 ppm.	SM		
 15	\forall	22, 50	Damp to moist, gray (10YR5/1), silty, very fine-grained SAND with some shells. Sample B11-15.0. TLV = 20 ppm.	SM		
	T	11, 18, 34	Saturated, brown (7.5YR5/2), medium- to coarse-grained SAND.	SP		
_			Saturated, gray (10YR5/1), silty, very fine-grained SAND with some pebbles. Sample B11-16.5. TLV = 20 ppm.	SM		
[Total Depth = 17.0 feet below grade. Boring converted to Monitoring Well (MW 11)			
_			See Well Construction Diagram for details.			
_		ļ				
NOTES: TPH	= to	tal petroleum h	ydrocarbons ppm = parts per million Par	70 1 of 1		

total petroleum hydrocarbons ppm = parts per million CGI/TLV = combustible gas reading TRPH= total recoverable petroleum hydrocarbons Page 1 of 1 = benzene sampling interval = toluene lower explosive limit = ethylbenzene

 sample analyzed for hydrocarbons
 ground water piezometric surface total xylenes ND = not detected at laboratory detection limits
Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

Total Depth = 17.0 Feet

PROJECT:	ARCO STATION 1919	BORING DATE:	02/12/92
			U21 12/32

LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

BORING NUMBER: B-12 MW (Z-GEOLOGIST: _J. GOODMACHER

APPROXIMATELY 10 FEET DRILLING COMPANY: A AND R DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

DEPTH (feet)	ī	BLOW	MATERIAL ENCOUNTERED	unas
o	├─	COUNTS		USCS
	i .		THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (4 inches).	
-			Moist, reddish brown (2.5YR4/4), clayey, sandy GRAVEL (Fill).	
			Theory, reading blown (2.5 114/4), clayby, sailty GRAVEL (Fill).	SP
			Cemented sandstone.	
			Damp, olive gray (5Y4/2), fine- to medium-grained SAND with some silt.	SP
_			•	
_				Ì
_				1
5			Domp elius grout (5V4) (5 - 4 1)	65
_		12, 23, 38	Damp, olive gray (5Y4/2), fine- to medium-grained SAND with some sitt. Damp, brownish yellow (10YR6/6), oxidized, fine- to medium-grained SAND	SP
- ++		ı	will some sit.	SP
_ ++			Damp, olive gray (5Y4/2), fine- to medium-grained SAND with some silt. Sample B12-6.0. TLV = 85 ppm. TPH < 5 ppm.	SP
<u> </u>	П	9, 13, 19	Moist, olive gray (5Y4/2), fine- to medium-grained SAND with some silt.	SP
- 又			Moist, olive gray (5Y8/1), fine- to medium-grained SAND with some silt.	SP
-	41	0 40 00	Sample B12-8.0. TLV = 100 ppm.	"
-		9, 18, 28		
- ++			Moist, very dark gray (5Y3/1), fine- to medium-grained SAND with some silt.	SP
 10 -	ᅫ		Sample B12-9.5. TLV = 3,000 ppm. TPH < 5 ppm.	.
- -	\dashv	10, 16, 18	Sampler is wet.	
-	-11	10, 10, 10	No recovery (rock in sampler).	
-	Ц		Saturated, dark gray (5Y4/1), medium-grained SAND with some silt. Sampler B12-11.5. TLV = 110 ppm.	SP
			Outspie D12-11.5. 1E4 = 110 ppiii.	
-	Ì			l
- 1	- 1			
-				
	ı			1
15 	П	8, 13, 28	No recovery (gravels in sampler). Sampler is wet.	
- [\coprod		Saturated, dark gray (5Y4/1), fine- to medium-grained SAND with pebbles. Sample B12-16.0. TLV = 20 ppm.	SP
- ++	П	32, 50	Wet, light vellowish brown (2.5Y6/4) sitty very fine- to fine-grained SAND	SM
' ' -	1		Sample B12-17.0. TLV = 0 ppm. TPH < 5 ppm.) SM
- 1			Total Depth = 17.5 feet below grade.	
- 1			Boring converted to Monitoring Well (MW-12). See Well Construction Diagram for details.	
-			Coo Troil Construction Diagram for details.	1
-				
				
NOTES, TOU		otal petroleum h		<u> </u>

NOTES: TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

benzene

= toluene = ethylbenzene totál xylenes

ND = not detected at laboratory detection limits
Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

ppm = parts per million CGI/TLV = combustible gas reading = sampling interval

LEL lower explosive limit sample analyzed for hydrocarbons

ground water piezometric surface

Total Depth = 17.5 Feet

Page 1 of 1

PROJECT:	ARCO STATION 1919	BORING DATE:	02/12/92
LOCATION: _	660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE:	10-INCH HOLLOW-STEM AUGER

BORING NUMBER: B-13 / MM - 13 APPROXIMATELY 10 FEET DRILLING COMPANY: A AND R DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

GEOLOGIST: _J. GOODMACHER

DEPTH (feet)	1	BLOW COUNTS	MATERIAL ENCOUNTERED	USCS
			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Damp, grayish brown (10YR4/2), silty, fine-grained SAND.	SM
 5 		1, 1, 2	Moist, dark gray (10YR4/1), silty, fine-grained SAND.	SM
-		1, 1, 1 2, 4, 7 2, 3, 7	Moist, dark gray (10YR4/1), silty, fine-grained SAND. Sample B13-7.5. No TLV. TPH < 5 ppm. Saturated, dark gray (10YR4/1), silty, fine-grained SAND. Sample B13-9.0. No TLV. TPH < 5 ppm. Saturated, dark gray (10YR4/1)), silty, fine-grained SAND. Saturated, grayish brown (10YR5/2), silty, fine-grained SAND. Sample B13-10.5. TLV = 0 ppm.	SM SM SM SM
		28, 50	Refusal to sampler. Grinding on peobles. Damp, olive gray (5Y4/2), silty, fine-grained SAND. Sample B13-16.5. TLV = 0 ppm. TPH < 5 ppm.	SM
- - -			Total Depth = 18.0 feet below grade. Boring converted to Monitoring Well (MW-13). See Well Construction Diagram for details.	

NOTES: TPH = total petroleum hydrocarbons ppm = parts per million CGI/TLV = combustible gas reading TRPH = total recoverable petroleum hydrocarbons ■ benzene = sampling interval = toluene lower explosive limit = ethylbenzene sample analyzed for hydrocarbons ground water piezometric surface X = total xylenes
ND = not detected at laboratory detection limits
Well elevations are measured to top of casing. Characters in parentheses represent Munsell color code designations. Total Depth = 18.0 Feet

Page 1 of 1

PROJECT: ARCO STATION 1919	BORING DATE:	02/13/92
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LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

BORING NUMBER: B-14 /MILL-14 GEOLOGIST: J. GOODMACHER

APPROXIMATELY 10 FEET

DRILLING COMPANY: A AND R DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

EPTH (feet)	ı	BLOW	MATERIAL ENCOUNTERED	USC
_ 0			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE.	
			Asphaltic Concrete (8 inches).	
			Damp, pale yellow (5Y8/4), fine-grained SAND.	SP
			·	
_				
-				
	- 1			
	- 1			
– 5	$\neg \dashv$	9, 22, 38	Damp, pale yellow (5Y8/4), medium- to coarse-grained SAND.	
	-	3, ZZ, 30	Sample B14-6.0. TLV = 15 ppm.	SF
ļ	- 11			
++	44		D	
i	-11	10, 15, 42	Damp, pale yellow (5Y8/4), medium- to coarse-grained SAND. Sample B14-6.5. No TLV. TPH < 5 ppm.	SF
_	-11		Moist, reddish yellow (75YR7/8), oxidized, silty, fine-grained SAND	SF
	Ш		I Sample B14-8.0. TLV = 10 ppm.	21
z l	\Box	14, 19, 29	Moist, pale yellow (5Y8/4), medium- to coarse-grained SAND.	SF
- 1			Wet, pale yellow (5Y8/4), medium- to coarse-grained SAND.	SF
1	11		No recovery.	•
1	$\neg \neg$	9, 14, 17	Saturated, pale yellow (5Y8/4), medium- to coarse-grained SAND.	SF
- 10	-11		Saturated, pale vellow (5Y8/4), oxidized, coarse-grained SAND.	
++			Saturated, write (2.518/2), tine- to medium-grained SAND.	S
•	\dashv	10, 14, 19	Sample B14-10.5. TLV = 45 ppm. TPH < 5 ppm. Saturated, yellowish brown (10YR5/6), fine-grained SAND.	Q.
	-11	10, 14, 15	Saturated, gray (10YR5/1), fine-grained SAND.	SF
	-11		Damp, olive gray (5Y5/2) SILT with zones of oxidation.	M
- 1	Щ		Damp, reddish yellow (7.5YR7/8), oxidized, medium- to very coarse-grained SAND with	SF
1	- 1		small pebbles.	
	- 1			
	- 1			
į				
– 15	П	14, 22, 31	Saturated, white (2.5Y8/2), medium- to coarse-grained SAND.	
!	-		Saturated, white (2.5Y8/2), oxidized, medium- to coarse-grained SAND with some silt. Wet, strong brown (7.5YR4/6), fine sandy SILT. Sample B14-16.0. TLV = 0 ppm.	_ <u>SI</u>
++	Ш		TDU - F nom	М
ŀ	+H	9, 12, 21	Wet, light brown (7.5YR6/4), fine sandy SILT.	_ M
]		J, 12, 21	Wet, light brown (7.5YR6/4), tine sandy SILT. Saturated, white (2.5Y8/2), coarse-grained SAND. Saturated, reddish yellow (7.5YR7/8), tine sandy SILT. Saturated, white (2.5Y8/2), sifty, very fine- to fine-grained SAND.	_ М S М
-			Saturated, white (2.578/2), sifty, very fine- to fine-grained SAND.	
<u> </u>			Odmple D14-17.5. TLV = 00 ppm.	SI
j	1		Total Depth = 18.0 feet below grade.	
i	l		Boring converted to Monitoring Well (MW-14).	
	- 1		See Well Construction Diagram for details.	
_	l			
<u> </u>				

TRPH = total recoverable petroleum hydrocarbons

В benzene ■ toluene

= ethylbenzene total xylenes

= not detected at laboratory detection limits

Well elevations are measured to top of casing.

Characters in parentheses represent Munsell color code designations.

ppm = parts per million CGI/TLV = combustible gas reading = sampling interval lower explosive limit

 sample analyzed for hydrocarbons = ground water piezometric surface

Total Depth = 18.0 Feet

PROJECT: ARCO STATION 1919	BORING DATE:	02/13/92
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LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: 10-INCH HOLLOW-STEM AUGER

BORING NUMBER: B-15 /MW-15 GEOLOGIST: J. GOODMACHER

APPROXIMATELY 10 FEET DRILLING COMPANY: A AND R DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

DEPTH (feet)	ı	BLOW COUNTS	MATERIAL ENCOUNTERED	USCS
			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Concrete (8 inches).	
[=			Moist, reddish brown (2.5YR 5/4), clayey, gravelly SAND (Fill).	SP
			Damp, pale yellow (5Y8/4), fine-grained SAND.	SP
_				
s 	_	1, 1, 2		
_ ++		,,,,-	Moist, black (5YR2.5/1), slightly very fine-grained, sandy SILT. Sample B15-7.0. TLV = 5,000 ppm. TPH = 1,100 ppm.	ML
_ _ _ ++	П	1, 1, 2	Moist, black (5YR2.5/1), micaceous, silty, very fine-grained SAND.	SM
 10		1, 2, 3	Sample B15-8.5. TLV = 300 ppm. TPH = 1,200 ppm. B = 2.7, T = 21.0, E = 8.1, X = 50.0 ppm. Moist, black (5YR2.5/1), micaceous, silty, very fine-grained SAND.	SM SM
		1, 2, 3	Sample B15-10.0. TLV = 80 ppm. Moist, black (5YR2.5/1), micaceous, silty, very fine-grained SAND.	SM
		1, 2, 1	Sample B15-11.5. TLV = 80 ppm. Moist, black (5YR2.5/1), micaceous, silty, very fine-grained SAND.	SM
		1, 2, 3	Sample B15-13.0. TLV = 90 ppm. Moist, black (5YR2.5/1), micaceous, silty, very fine-grained SAND.	SM
—— 15 ——— ++		2, 2, 3	Sample B15-14.5. TLV = 90 ppm. Saturated, black(5YR2.5/1), micaceous, silty, very fine- to fine-grained SAND. Saturated, black (5YR2.5/1), micaceous, slightly silty, fine-grained SAND. Saturated, black (5YR2.5/1), micaceous, silty, fine-grained SAND with shells. Sample B15-16.0. No TLV. TPH < 5 ppm.	SM SM SM
<u>-</u> -			Total Depth = 16.5 feet below grade. Boring converted to Monitoring Well (MW-15). See Well Construction Diagram for details.	
_ _ _				

NOTES: TPH = total petroleum hydrocarbons = parts per million Page 1 of 1 TRPH = total recoverable petroleum hydrocarbons CGI/TLV = combustible gas reading I = sampling interval = benzene = toluene LEL lower explosive limit = sample analyzed for hydrocarbons = ground water piezometric surface

Total Depth = 16.5 Feet

PROJECT:	ARCO STATION 1919	BORING DATE:	02/13/92
		DOMING DATE.	0

660 VIA DE LA VALLE, SOLANA BEACH LOCATION: __ BORING TYPE: 10-INCH HOLLOW-STEM AUGER

BORING NUMBER: B-16 /MW-16 GEOLOGIST: J. GOODMACHER

APPROXIMATELY 10 FEET DRILLING COMPANY: _A AND R DRILLING **ELEVATION: ABOVE MEAN SEA LEVEL**

DEPTH (feet)	ī	BLOW COUNTS	MATERIAL ENCOUNTERED	USCS
0			THREE POST HOLES DRILLED TO 4 FEET BELOW GRADE. Asphaltic Concrete (16 inches).	
			Moist, reddish brown (2.5YR5/4), clayey, gravelly SAND (Fill).	SP
_ _			Damp, pale yellow (5Y8/4), fine-grained SAND.	SP
— 5 —	T	1, 1, 1	Moist, light olive brown (2.5Y5/6), slightly silty, fine-grained SAND.	SP
- ++		1, 1, 1	Sample B16-6.0. TLV = 150 ppm. TPH < 5 ppm.	SP
— ×		1, 1, 1	No recovery. Moist, light plive brown (2,5Y5/6) slightly sitty fine-grained SAND. Moist, very dark grayish brown (10YR3/2), silty, fine-grained SAND. Sample B16-8.0. TLV = 180 ppm.	- \$P SM
_ ++ _ 10		·	Wet, very dark grayish brown (10YR3/2), silty, fine-grained SAND. Sample B16-9.5. TLV = 250 ppm. TPH < 5 ppm.	SM
_		2, 2, 3	Moist, black (5YR.52/1), micaceous, silty, very fine-grained SAND.	SM
		2, 3, 4	Moist, black (5YR2.5/1), very micaceous, silty, very fine-grained SAND. Sample B16-11.0. TLV = 200 ppm.	SM
	_	4, 5, 7	Moist, black (5YR2.5/1), micaceous, silty, fine-grained SAND. Sample B16-12.5. TLV = 50 ppm.	SM
— —— 15 ——		2, 3, 3	Sample B16-14.0. TLV = 120 ppm. Saturated, black (5YR2/1), micaceous, silty, very fine- to fine-grained SAND.	SM
- - - ++		3, 4, 6	Saturated, dark gray (N4), micaceous, silty, very fine- to fine-grained SAND. Saturated, dark gray (N4), micaceous, slightly silty, fine- to medium-grained SAND. Sample B16-15.5. No TLV.	SM SM
			Sample B16-17.0. TLV = 160 ppm. TPH < 5 ppm. Total Depth = 17.5 feet below grade.	
_ _ 			Boring converted to Monitoring Well (MW-16). See Well Construction Diagram for details.	
NOTES: TRU				<u> </u>

NOTES: TPH = total petroleum hydrocarbons ppm = parts per million
CGI/TLV = combustible gas reading
| = sampling interval Page 1 of 1 TRPH = total recoverable petroleum hydrocarbons = benzene toluene lower explosive limit
sample analyzed for hydrocarbons = ethylbenzene totál xylenes = ground water piezometric surface ND = not detected at laboratory detection limits
Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

Total Depth = 17.5 Feet

ALIUN GEUSCIENCE **BORING LOG**

PROJECT:	ARCO STATION 1919 (600064-21)	BORING DATE:	7/22/92
LOCATION:	660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE:	10-INCH HOLLOW-STEM AUGER

LOCATION: _ BORING NUMBER: B-17 /MW - M GEOLOGIST: J. GOODMACHER

APPROXIMATELY 10 FEET ABOVE MEAN SEA LEVEL DRILLING COMPANY: VALLEY WELL DRILLING **ELEVATION:** _

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
_ 0			THREE HAND AUGER BORINGS DRILLED TO 5 FEET BELOW GRADE. Asphaltic concrete (4 inches).	
_			Damp, reddish brown (2.5YR4/4), clayey, sandy GRAVEL.	GC
-				
				
_				
 - ++ 5	-		Damp, very dark grayish brown (10YR3/2), fine-grained SAND with some silt. Sample B-17-4.5. TPH < 10 ppm.	SP
_ _ ++		4,3,3	Sample B-17-6.0. TLV ≈ 660 ppm. TPH < 10 ppm.	
_	$\left[\right]$	1, 1, 1	Damp, dark grayish brown (10YR4/2), fine-grained SAND with some silt. Sample B-17-7.5. TLV = 560 ppm. TPH = 1,711 ppm; B = 36.38; T = 215.16; E = 41.59; X = 336.15.	SP
	H	1	Wet, dark olive gray (5Y3/2), fine-grained SAND with some sirt.	SP
		1, 1, 2	Saturated, very dark grayish brown (2.5Y3/2), fine-grained SAND with some silt. Saturated, black (N2), fine-grained SAND with some silt.	SP SP
 10 ++ 	-	4, 4, 6	Saturated, olive gray (5Y5/2), slightly silty, fine-grained SAND. Sample B-17-10.0. No TLV. TPH < 10 ppm.	SP
		3, 6, 8		
·	Н	_	TLV < 20 ppm.	SP
		4, 6, 8	Saturated, olive gray (5Y5/2), slightly silty, fine- to medium-grained SAND.	SF.
_	Н	-	TLV = 50 ppm.	
15		3, 10, 13	Wet, strong brown (7.5YR5/8), fine-grained SAND. TLV = 1,100 ppm.	SF
		H	Wet, olive gray (5Y5/2), slightly silty, fine- to medium-grained SAND. Wet, strong brown (7.5YR5/8), fine-grained SAND.	SF SF
	ł	7, 12, 15	Wet, olive (5Y5/4), very fine-grained, sandy SILT. No TLV.	M
-17.5		10,50	Wet, olive (5Y5/3), silty, fine-grained SAND with shell fragments.	SA
-	E	100	Wet, pale yellow (5Y7/3), silty, fine-grained SAND; zones of oxidation present.	S
	-	40, 50	Wet, olive (5Y5/3), fine-grained SAND. Wet, pale yellow (2.5Y8/4), fine- to medium-grained SAND. Wet, light gray (5Y7/1), fine- to medium-grained SAND.	SI SI
20			Total Depth = 20 feet below grade. Boring converted to Monitoring Well MW-17. See well construction diagram for details.	

ppm = parts per million
CGI/TLV = combustible gas reading
1 = sampling interval
LEL = lower explosive limit NOTES: TPH = total petroleum hydrocarbons TRPH = total recoverable petroleum hydrocarbons = benzene = toluene sample analyzed for hydrocarbons ethylbenzenetotal xylenes ground water piezometric surface measured 7/30/92

ND = not detected at laboratory detection limits
Well elevations are measured to top of casing.
Characters in parentheses represent Munsell color code designations.

Total Depth = 20 Feet

BORING LOG

PROJECT: ARCO STATION 1919 (600064-21)	BORING DATE:
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: 10-INCH HOLLOW-STEM AUGER
GEOLOGIST: J. GOODMACHER	BORING NUMBER: B-18 /MW-18
DRILLING COMPANY: VALLEY WELL DRILLING	APPROXIMATELY 10 FEET ABOVE MEAN SEA LEVEL

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
_ 0			THREE HAND AUGER BORINGS DRILLED TO 6 FEET BELOW GRADE. Asphaltic concrete (8 inches).	
<u></u>			Damp, reddish brown (2.5YR4/4), clayey, sandy GRAVEL.	GC :
		6, 13, 17	Damp, dark yellowish brown (10YR4/4), fine- to medium-grained SAND.	SP
- - - ,	H	4, 6, 8	TLV = 120 ppm. Rocks in sampler. No recovery from 6.5 to 7.5 feet.	
- ++ - 又 -		1, 3, 6	Sample B-18-7.5. TPH < 10 ppm. Wet, dark yellowish brown (10YR4/4), fine- to medium-grained SAND. No recovery from 8.0 to 8.5 feet.	SP
- - 10	H	6, 6, 7	No recovery from 9.5 to 11.0 feet.	
• • ++ •	-	2, 3, 6	Sample B-18-11.0. TPH < 10 ppm. Wet, black (N2), micaceous, silty, very fine-grained SAND.	SM
-			Saturated, black (N2), micaceous, silty, very fine-grained SAND.	SM
- - -				
15 -		2, 4, 7	Saturated, black (N2), micaceous, silty, very fine-grained SAND.	SM
-	Ц		Plant debris (roots, leaves). No TLV.	
				
-				
20			Saturated, dark yellowish brown (10YR4/4), fine- to medium-grained SAND.	SP
			Total Depth = 20 feet below grade. Boring converted to Monitoring Well MW-18. See well construction diagram for details.	

NOTES: TPH = total petroleum hydrocarbons TRPH = total recoverable petroleum hydrocarbons B = benzene T = toluene E = ethylbenzene X = total xylenes ND = not detected at laboratory detection limits Well elevations are measured to top of casing. Characters in parentheses represent Munsell color code design	CGVTLV = LEL = T	parts per million combustible gas reading sampling interval lower explosive limit sample analyzed for hydrocarbons ground water piezometric surface measured 7/30/92 Total Depti
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Total Depth = 20 Feet

Page 1 of 1

BORING LOG

PROJECT:	ARCO STATION 1919 (600064-21)	BORING DATE:	23/92
LOCATION: _	660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: 10-	INCH HOLLOW-STEM AUGER
GEOLOGIST:	J. GOODMACHER	BORING NUMBER:	B-19 M W 10 PEET
			ABOVE MEAN SEA LEVEL

EPTH (feet)	u	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
- 0			THREE HAND AUGER BORINGS DRILLED TO 5.5 FEET BELOW GRADE. Asphaltic concrete (8 inches). Dry, yellowish brown (10YR5/4), slightly silty, very fine-grained SAND.	SP
5	T		TLV = 10 ppm. Dry, dark yellowish brown (10YR4/4), fine-grained SAND.	SP
•		4, 4, 4	Damp, dark yellowish brown (10YR4/4), fine-grained SAND.	SP
一 ++ . 又		4, 4, 4	Sample B-19-7.5. No TLV. TPH < 10 ppm.	
- - - 10 + +		2, 3, 3	Rocks in sampler. No recovery from 8.0 to 8.5 feet. Damp, dark yellowish brown (10YR4/4), fine-grained SAND. Wet, dark yellowish brown (10YR4/4), fine-grained SAND. Wet, black (5YR2.5/1), micaceous, silty, fine-grained SAND. Wet, dark yellowish brown (10YR4/4), fine-grained SAND. Wet, black (5YR2.5/1), micaceous, silty, fine-grained SAND. Sample B-19-10.5. TLV = 50 ppm. TPH < 10 ppm.	SP SP SP SP SA
- - 		3, 7, 8	Saturated, black (5YR2.5/1), micaceous, silty, fine-grained SAND. TLV = 20 ppm.	SA
- - - - 15 		4, 7, 8	Saturated, black (N2), micaceous, silty, very fine- to fine-grained SAND. TLV = 100 ppm. Plant debris in sampler.	SI
			Saturated, yellowish brown (10YR5/4), fine- to medium-grained SAND. TLV = 140 ppn Total Depth = 20 feet below grade. Boring converted to Monitoring Well MW-19. See well construction diagram for details	ł

B T E X Ni	RPH = total recoverable petroleum hydrocarbons = benzene = toluene = ethylbenzene = total xylenes D = not detected at laboratory detection limits	ppm = parts per million CGI/TLV = combustible gas reading I = sampling interval LEL = lower explosive limit + + = sample analyzed for hydrocarbons ▼ = ground water piezometric surface measured 7/30/92
W	fell elevations are measured to top of casing.	

Well elevations are measured to top of casing.

Characters in parentheses represent Munsell color code designations.

Total Depth = 20 Feet

PROJECT NO.: 600064-10						DATE DRILLED: OCTOBER 5, 1993				
LOCA	TION	<u>: </u>	AR	co s	TATION 1919	LOGGED BY: G. B				
		_	660	O VIA I	DE LA VALLE,	APPROVED BY: R. K	OFR	ON	, CEG	
			SO	LANA	BEACH, CALIFORNIA	DRILLING CO.: H-F	DRIL	LIN	IG, INC.	
			Π		DRILLING METHOD: 8-INCH HOLLOWS	TEM AUGER				
					SAMPLER TYPE: SPLIT SPOON					
E C		_		(G	TOTAL DEPTH: APPROXIMATELY 14 FE	ET BELOW GRADE		چ	BORING BACKFILL	
NS SE	udd)	TPH (ppm)	PLE	ОЕРТН (Љд)	ELEVATION: FEET ABOVE MEAN	SEA LEVEL	_ ا	ğ	DETAIL	
BLOWS PER 6 INCHES	CGI (ppm)	HGH.	SAMPLE	DEP.	DEPTH TO GROUND WATER: APPROX.		nscs	ПТНО СОВУ		
	 			_0	DESCRIPTION		<u> </u>	-		
				L"	Asphaltic concrete 2 inches thick. Hand augered to 5 feet below grade.				Concrete	
	1			- 1					1 — (1 bag)	
				_ _2					[-{	
·									1 ²	
		İ		—з					3	
				-					│ 	
	100			_4	Loose, moist, light olive gray (5YR 5/2), fine-graine	d SAND.	SP		4 1 2 2 2 3	
			_	5	de anno ancientificate di la consegui (Transportino di				5 🕽 💸	
3,4,7				_	Loose, moist, light olive gray (5Y 5/2), silty, fine-gra Sample B-20 - 6.	ained SAND.	SM		 ***1	
	500	ND	Ш				 -		1 6 - * * * * 1	
1,1,2				_7	Soft, moist, olive gray (5Y 3/2), micaceous SILT.		ML		7— Bentonite	
.,,,_	2,000	421		- 1	Sample B-20 - 7.5.				Grout (1.5 bags)	
			H	-8	Soft, moist, black (N1), micaceous SILT, with fine-c		١.,,		8	
1,1,2	400			_9	301, moist, black (41), micaceous Silli, will line-(graineo sano.	MH		∦ ;_;∵;;	
	1		H	-					- £ × × × × × × × × × × × × × × × × × ×	
1,2,4	100	ND		—10	Soft, moist, black (N1), micaceous SILT, with fine-g	grained sand.			10	
	100			_11	Sample B-20 - 10.5.				1,7;;;	
1,2,3	75			_	Soft, moist, black (N1), micaceous SILT, with fine-g	grained sand.	i			
	"			-12					12	
1,2,4			\prod	— —13	Soft, moist, black (N1), micaceous SILT, with fine-ç	grained sand.			 	
.,,,,	75			-					#~;;;;	
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		ron osc		JCF	LOG OF EXPLORATO	BY BORING		_	B-20	
	San	DSC Diego,	Cali	fornia					PAGE 1 OF 1	

PROJ						DATE DRILLED: OCTOBER 5, 1993				
LOCA	TION	:			ATION 1919	LOGGED BY: G. BUCKNER				
					DE LA VALLE,	APPROVED BY: R. K	OFR	ON,	CEG	_
	·		SO	LANA	BEACH, CALIFORNIA	DRILLING CO.: H-F	DRIL	LING	G, INC.	_
					DRILLING METHOD: 8-INCH HOLLOWS	TEM AUGER				
					SAMPLER TYPE: SPLIT SPOON				<u>.</u>	
Ä				क्र	TOTAL DEPTH: APPROXIMATELY 15 FE	ET BELOW GRADE		ا ج	BORING	
VS P	m d	Ed	삙	E) H	ELEVATION: FEET ABOVE MEAN	SEA LEVEL		ဒ္ဓ	BACKFILL DETAIL	
BLOWS PER 6 INCHES	CGI (ppm)	ТРН (ррт)	SAMPLE	ОЕРТН (Љg)	DEPTH TO GROUND WATER: APPROX. 8		nscs	<u> ПТНОСОВ</u> Ү	52.7.112	
	 	-	 "		DESCRIPTION		<u> </u>	7		
				-0	Asphaltic concrete 2 inches thick. Hand augered to 5 feet below grade.				Concrete	
				_1	•				(1 bag)	
				- 1					_{\$\$\$}	
	İ			_2					2	
				_					_\t\\	
				_	Loose, moist, light olive gray (5Y 5/2), silty, fine-gra	inad SAND			³⋣ѷѷ∜	
				-4	www, most, light one gray (31 3/2), sitty, line-gra	ined SANU.	SM	龖	₁ ‡;;;{	
				-			,		1,7,7,1	
				-5					5-{**}	
				_6						
3,3,3		ND		_	Loose, wet, light olive gray (5YR 5/2), fine-grained Sample B-21 - 6.5.	SAND with silt.	SP		°Z\$\$}	
0,3,3	50			-7	·				7	
			Ш	-,					Bentonite Grout	
2,2,4	600	ND			Sample B-21 - 8.5.	:			8 (1.5 bags)
			Ш	_9			·		, <u>}</u> ;;;	
6,7,9	200			-	Loose, wet, black (N1), fine-grained SAND with sitt				****	
	300	68		—10	Sample B-21 - 10.				10	
6,8,10					Loose, wet, light olive gray (5YR 5/2), fine-grained	SAND with silt.			-{**}}	
0,0,10	100			_'' [Soft, moist, light brown (5Y 5/6) SILT.		ML		"];;;}	
		Ì	H	-12	Loose, wet, light gray (N7), fine-grained SAND.		SP		12	
6,9,10	20			-					:**;	
				—13	Loose, wet, light gray (N7), fine-grained SAND.				13 - 7 7 7 7	
3,19,23			П	_ _14	Loops wat light grow (NIT) for any order				,, ,, ,, ,,	
,	25			_	Loose, wet, light gray (N7), fine-grained SAND.		<u> </u>		' ***\$	
			Н	15	Soft, moist, light brown (5Y 5/6) SILT.		ML	Ш	15	
	:			-					-	
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		ON			LOG OF EVELOPATO	DV DODINO			B-21	
	San	DSC Diego,	Calf	ornia	LOG OF EXPLORATO	NI BUKING		ı	PAGE 1 OF 1	
										<u> </u>

PRO)JEC	r no.:	600	0064-	10	DATE DRILLED: OCT	OBE	R 5,	1993	
LOC	ATIO	N:	AR	cos	TATION 1919	LOGGED BY: G. BUCKNER				
			660	VIA	DE LA VALLE,	APPROVED BY: R. K	OFR	ON,	CEG	
			SO	LANA	BEACH, CALIFORNIA	DRILLING CO.: H-F	DRIL	LIN	3, INC.	
	I				DRILLING METHOD: 8-INCH HOLLOW ST	TEM AUGER		П		
					SAMPLER TYPE: SPLIT SPOON					
gg.				2	TOTAL DEPTH: APPROXIMATELY 17 FE	ET RELOW GRADE			BORING	
SPE	Ę	Œ	Щ	Ē	ELEVATION: FEET ABOVE MEAN			8	BACKFILL	
BLOWS PER 6 INCHES	CGI (ppm)	ТРН (ррт)	SAMPLE	ОЕРТН (109)	DEPTH TO GROUND WATER: APPROX. 10		nscs	итносоач	DETAIL	
86	ర	₽	S/	Ö	DESCRIPTION	or recribed to the control of the co	รา	5.		
				o	Concrete 2 inches thick.				0-	
Ì		·	l	-	Hand augered to 5 feet below grade.				Concrete (1 bag)	
İ				 1					1-	
				_2		·			_	
				_ :					'];;;;	
47/100			H	— 3			l		3	
			Н	-					- ‡ **\$\$	
4"/100				4	Dense, dry, light brown (5Y 5/6), fine-grained SAND	with trace of silt.	SP		4-2003	
				 5					5	
7,19	200			_	Loose, moist, light olive gray (5Y 5/2), fine-grained	SAND.			-{***}	
			Н	6	Medium dense, moist, yellowish gray (5YR 7/2), fine	e-grained SAND.			6-{**}	
7,15,20	100			 7	,	•			_{\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
		ND	Ш		Sample B-22 - 7.5.				7-{223	
30,54	100			8	Medium dense, moist, yellowish gray (5YR 7/2), fine	grained SAND.			8 Bentonite	
			H	_					(1.5 bags)	
12,18,22	3,700			-9	Medium dense, moist, light ofive gray (5Y 5/2), fine-	grained SAND.			9— <u>;;;;</u>	
				-					十 ;;;;	
14,21	8,000	20,116		-10 \	Sample B-22 - 10.5.				10	
			H	-11	Medium dense, wet, light ofive gray (5Y 5/2), fine-gr	rained SAND.			" <u>\</u> ;;;	
14,22,30	400			_			1			
				12	Medium dense, wet, black (N1), fine-grained SAND				12	
6,18	100	ND		_ 13	Sample B-22 - 13.				<u>, -{**}}</u>	
			Ш	_ '	Loose, wet, medium gray (N5), fine-grained SAND.	•			13 I 2 2 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
6,11,17	100			—14					14	
				-	Loose, wet, light brown (5Y 5/6), fine-grained SAND).			十;;;;	
			鬥	—15 —		-			15	
			\square	— —16						
	100		[]	_	Loose, wet, light brown (5Y 5/6), fine-grained SAND).			" <u></u> ";";\	
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	A G	LTON EOSC	IEN	CE	LOG OF EXPLORATO	RY BORING			B-22	
	 Sa	n Diego,	Calif	ornia					PAGE 1 OF 1	

TEST BORING LOG

TVDE	10	* Walle	w Stan	I 1 Auger		, i				TION	~16.0	feet	BORING	B-22
ГҮРЕ	10	Hone	W Stell	Auger			пБ	77 77			TE: 4 inches		<u> </u>	<u> </u>
		ŀ	Į				ll Ř	71				ne SILTY SA	ND	
						2			J	rilli. Ola	inge prown, n			
		ļ								concr	ete slab from	2.5 to 3 feet		
	103	3.8	100+	2.5	1	3		41		TORREY	SANDSTO	VE: Orange b	rown, fine to med	ium,
	103	3.6	100 .	-	-			31		moderate	ly indurated S	ILTY SAND	STONE	
		1	100+	1.4	2	4.		出]						
			200			_	▋▐			Gray gree	n, fine to me	dium, friable S	SANDSTONE wi	th a trace
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	108	4.8	54	2.5	5 ,	8		<u>:]:</u> [
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			28	1.4	10	14		川				n, moderately	indurated SILTY	
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	117	16.7	100+	2.5	11					Mottled	gray green an	d orange brow	wn, fine to mediu OSTONE with sca	m, attered
<u>,,, , , , , , , , , , , , , , , , , , </u>						17		4			ons to 1 inch		JOTOTAL WILLIAM	· ·
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										Notes:				
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		,										ing is 17 feet.		
					ļ							untered at 10.	5 feet during dril	ling.
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当共立で	DENSITY (pcf)	ES	7,	퍼뽔	Щ	PT		RE	[디디	CONDI		DIFFER A.	TOTHER LOCA	7710149
が可能でい		MOISTURE	BLOWS/F00T	SAMPLE SIZE (inches)	SAMPLE NO.	DEPTH (feet)		MATERIAL SYMBOL	UNIFIED SOIL CLASS.	AND T	imes.		1	
<u>بد</u> ربي	RY	ı≓		1 至し	₹	I		E	こび	TOGO	Va day	1117	DATE	40 5 03
는 FE CS	1 👺	-	I 📆	<u> </u>	വ	l		1	ı ≍	TOOL	ED BY	JJV	DAIL	10-5-93

PRO	JECT	NO.:	60	0064-1	0	DATE DRILLED: OCT	OBE	R 5	1993	
1	OITA				FATION 1919	LOGGED BY: G. B				
		·	660	O VIA [DE LA VALLE,	APPROVED BY: R. KOFRON, CEG				
			SO	LANA	BEACH, CALIFORNIA	DRILLING CO.: H-F				
					DRILLING METHOD: 8-INCH HOLLOWS	TEM AUGER				
					SAMPLER TYPE: SPLIT SPOON				DODING	
E,		E		(g	TOTAL DEPTH: APPROXIMATELY 13.5	FEET BELOW GRADE		눍	BORING BACKFILL	
WSF	CGI (ppm)	ΓΡΗ (ppm)	SAMPLE	DЕРТН (lb g)	ELEVATION: FEET ABOVE MEAN		W	2C	DETAIL	
BLOWS PER 6 INCHES	CG	TPH	SAN	DEP	DEPTH TO GROUND WATER: APPROX. 1 DESCRIPTION		uscs	ПТНО СОВУ		
				-0	Asphaltic concrete 2 inches thick.				0	
		.		-	Hand augered to 5 feet below grade.				Concrete (1 beg)	
				-1					1-	
				_2						
				L		•			*	
				—з					3	
				- ,			}		- ()	
			-			e e e			1	
			-	-5	Medium dense, moist, yellowish gray (5Y 7/2), fine	-grained SAND	SP		5	
35,17,18	25			-	with trace of silt.	g			-\$***	
			Ш	6	. •				6-7-7-7	
				_7					7 - ()	
15,18,22			\vdash	-					Bentonite	
10,10,22	50	ND		-8	Medium dense, moist, yellowish gray (5Y 7/2), fine Sample B-23 - 8.5.	-grained SAND.			8 V Grout V V V (1.5 bags)	
			\coprod	_9	овире 6-23 - 6.5.				,	
9,10,11	100			-	Loose, moist, light brown (5Y 5/6), fine-grained SA	ND.				
		ND		10 ∇	Sample B-23 - 10.				10-	
7,7,8	100	ND	П	-11	Loose, wet, light brown (5Y 5/6), fine-grained SAN Sample B-23 - 11.	D.				
				_					`` _ ```\	
		: 	H	-12	Loose, wet, light brown (5Y 5/6), fine-grained SAN	D.			12	
14,20,23	25		$\ \ $	_ _13	Dense, moist, yellowish gray (5Y 7/2), cemented, f	ine-grained SAND.				
			Щ	<u> </u>	Refusal at 13.5 feet below grade.		ļ		\\\`\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
				-14	·				14-	
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				F						
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									-	
				F						
				H					-	
400			_	<u> </u>			_			
	A G	LTON EOSC	IE	NCE	LOG OF EXPLORATO	RY BORING			B-23	
	Sa Sa	n Diego	Cal	ifornia	L		<u> </u>		PAGE 1 OF 1	

PRO	JECT	NO.:	60	0064-1	0	DATE DRILLED: OCTOBER 5, 1993				
LOC	ATIO	N:			FATION 1919	LOGGED BY: G. B	UCK	NEF		
		· —			DE LA VALLE,	APPROVED BY: R. K				
			SO	LANA	BEACH, CALIFORNIA	DRILLING CO.: H-F	DRIL	LIN	G, INC.	
					DRILLING METHOD: 8-INCH HOLLOW ST	TEM AUGER				
			İ		SAMPLER TYPE: SPLIT SPOON		ŀ		BODINO	
E S	(~		ĝ	TOTAL DEPTH: APPROXIMATELY 16.5 F	EET BELOW GRADE		չ	BORING BACKFILL	
X X	CGI (ppm)	ГРН (ррм)	Ξ	DЕРТН (fbg)	ELEVATION:FEET ABOVE MEAN		W	윉	DETAIL	
BLOWS PER 6 INCHES	ig C	TPH	SAMPLE	DEP	DEPTH TO GROUND WATER: APPROX. 1		uscs	итносоа У		
<u> </u>			 	-0	DESCRIPTION		_			
				Ľ	Asphaltic concrete 2 inches thick, Hand augered to 5 feet below grade,				Concrete	
				-1			1		1 — (1 bag)	
				-					- ;;;;	
				-2					2	
		•		_3			ŀ		3 7 7 7 7	
				-	-				+;;;	
				-4					4-\$\$\$\$	
			L	_5						
9,12,16			$\ \ $	L	Loose, moist, light gray (N7), fine-grained SAND.	* • m*	SP		°Ţ;;	
	25			– 6					6-{**}	
			十	-,	•				{\$\$\$}	
				- ⁷					/士***	
7,12,15				— 8	Loose, moist, yellowish gray (5Y 7/2), fine-grained	SAND.			8 V Bentonite	
	50	ND		-	Sample B-24 - 8.5.				(1.5 begs)	
10,14,21			H	-8	Medium dense, wet, light gray (N7), fine-grained S	AND.			9-1223	
	5,000			_10	Medium dense, wet, olive gray (5Y 3/2) and black (0				
		11,860	\mathbb{H}	∇	Sample B-24 - 10.5.				~_{\$\$\$}	
13,21,20	6,000			-11	Medium dense, wet, light gray (N7), fine-grained S	AND.			11-4:2:3	
			Ш	_12					<u>,</u>	
20,24,20		20		_	Medium dense, wet, light gray (N7), fine-grained Sample B-24 - 12.5.	AND.	l		[<u>*</u> ***;	
	800			—13	•				13 - ()	
17,20,22			廾	-			l		-{:::	
				_14	Medium dense, wet, light gray (N7), fine-grained S	AND.			14	
			H	-15					15 - * * * * * * * * * * * * * * * * * *	
13,14,22				-	Medium dense, wet, very pale orange (10YR 8/2),	fine-grained SAND			 ***1	
				 16		g			16-	
				_17				T	17-	
				<u> </u>						
				18					18—	
				–						
	<u>L</u>	<u> </u>	<u>L</u>	1		·	_			
		LTON		VCE	LOG OF EXPLORATO	RY BORING			B-24	
	GEOSCIENCE LOG OF EXPLORATORY BORING PAGE 1 OF 1									

PRO	JEC1	'NO.:	60	0064-1	0	DATE DRILLED: OCTOBER 5, 1993								
LOC	ATIO	N:	AR	CO S1	TATION 1919	LOGGED BY: G. BUCKNER								
1			660	NIV C	DE LA VALLE,	APPROVED BY: R. KOFRON, CEG								
			so	LANA	BEACH, CALIFORNIA	DRILLING CO.: H-F								
					DRILLING METHOD: 8-INCH HOLLOWS	TEM AUGER								
					SAMPLER TYPE: SPLIT SPOON				DODUIG					
E E		_		क्र	TOTAL DEPTH: APPROXIMATELY 13.5	OTAL DEPTH: APPROXIMATELY 13.5 FEET BELOW GRADE BORING BACKFILL								
BLOWS PER 6 INCHES	CGI (ppm)	ТРН (ррт)	필	DЕРТН (fbg)	ELEVATION:FEET ABOVE MEAN	SEA LEVEL		итносоау	DETAIL					
NO NO	ğ	Hď.	SAMPLE	Į ĕ	DEPTH TO GROUND WATER: APPROX. 1		uscs	본						
			0		DESCRIPTION			-						
				⊢° ∣	Concrete 2 inches thick. Hand augered to 5 feet below grade.	:	ļ	¥30000	Concrete					
				\Box_1					(1 bag)					
				-2					2-/;;;					
				-					七::::1					
				_3 _			ļ		3					
			_	L4					√ ;;;;					
13,15,26				_	Medium dense, moist, grayish yellow (5Y 8/4), fine-	grained SAND.	SP		1,5,5,1					
			Ш	-5					5					
				-					-};;;;					
				-6					6-7,00					
				_7			1		, 」、、、、、、、、、、、、、、、、、、、、、、、、、、、、、、、、、、、、					
1			-	<u> </u>	Very dense dry year sale cranes (1000 am)	iontod Son reninad CAND			Grout					
24,50/4*	0	ND		-8	Very dense, dry, very pale orange (10YR 8/2), cem Sample B-25 - 8.	ienieo, mie-graineo SANU.			8					
9,13,15			+	-					- * ***					
9, 13, 13	25			— 9	Medium dense, wet, yellowish gray (5Y 7/2), fine-g	rained SAND.			9-1007					
1 1					Madison dana and millionist concessor	:			<u>,</u>					
7,18	20	ND		LΨ	Medium dense, wet, yellowish gray (5Y 7/2), fine-g Sample B-25 - 10.5.	rained SAND.			["];"					
			-	-11			1		[n_{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot					
6,10,11	25			-	Medium dense, wet, yellowish gray (5Y 7/2), fine-g	rained SAND.			[<u>**</u> *}					
	-	ND	$\ \ $	12	Sample B-25 - 12.				12- [
7,11	20		\parallel	— —13	Medium dense, wet, pale yellowish orange (10YR)	8/6), fine-grained SAND			[,,					
			Ш	<u> </u>	with trace fine gravel.				[" <u>]</u>					
1 1				-14			1		14-					
				-					-					
				-			1		-					
				 -										
				-										
				-					-					
				一										
				L										
	Ā	LTON			LOC OF EVELOPATO	DV DODINO			B-25					
	A G Sa	EOSC n Diego	IEI Cal	VCE fornia	LOG OF EXPLORATO	HT BUHING			PAGE 1 OF 1					
					· · · · · · · · · · · · · · · · · · ·									

TEST BORING LOG

				ı		<u>5 I</u>	D	<u>U</u>	K I	17 G	LOG			
TYPE	1	0" Holl	ow Ster	n Auger	•			EL	EVA	TION	~16.0	feet	BORING	B-25
								\bowtie	0) (ETE: 4 inches			
						. 1	$\parallel \mid \perp$		SM	FILL: Lig	ht brown, fine	to medium	SILTY SAND	
;						2	-							
	109	5.4	24	2.5	. 1									
	107	• • • • •			_	3							rown, fine to med	lium,
			93	1.4	2	4				moderate	ly indurated S	ILTY SAND	STONE	
				ļ		4								
						- 5-	<u> </u>			•				
				ĺ										
						6	$\parallel \vdash$			Light bro	wn, fine to me	dium, moder	rately indurated S	LTY
•											ONE with fin			
				ŀ		7								
	111	4.5	100	2.5	3									
			:			8					etion at 8.5 fe			
			28	1.4	4	9					en, fine to med	lium, friable	SANDSTONE wi	th a trace
										of SILT				
	445	142	25	2.5	5	10 -	I -			:				
	117	14.2	25	2.5	د					conci	etions to 2 in	ch diameter		
			21	1.4	6	11								
					_									
						12								
Sample			18	2.5	7	13			l	color	change to ora	inge brown		
Disturbed	; ;					13								
	ļ		100+	1.4	8	14		И,		Brown, fi \SANDSI		, moderately	indurated SILTY	
							$\ \ $	V		ISAIND31	ONE			
									1	Notes:				
											depth of borir		E fact during drill	
						1	Ш			3. No car		ntered at 10.	5 feet during drill	ing.
							Ш				g backfilled by	Alton Geos	cience.	
		ŀ					Ш			· .				
		İ		.			$\parallel \parallel$							
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										1				
									1			•	•	
						<u> </u>	Ш	_				*** ** **		
<u>۵</u> د ۸۰	}	1,1	=	12	ċ			,	_ 0	THIS BO			APPLIES ONL	
KE/DI other PTH- CIFIC JTES	ISI SI	ਤੌਤ	l G	IS (S	ž	王子		EI-	딤운	TIMEA			TED. SUBSURI OTHER LOCA	
d officers of the control of the con	(pcf)	ES:	\ <u>\S</u>	백충	Щ	DEPTH (feet)		H.E	로	AND TI		DIFFEK AT	OTHER LOCA	1101/2
STRIKE/DIP and other DEPTH- SPECIFIC NOTES	-	MOISTURE (%)	BLOWS/F00T	SAMPLE SIZE (inches)	SAMPLE NO.	55		MATERIAL	UNIFIED SOIL CLASS.					
C a o	DRY	~	ਜ਼	&	ર્જ	}			S	LOGG	ED BY	JJV	DATE	10-5-93
				<u> </u>						*			·	

			60	0064-	10	DATE DRILLED: OCTOBER 5, 1993				
LOC	OITA	N:	AF	RCO S	TATION 1919	LOGGED BY: G. BUCKNER				
			66	O VIA	DE LA VALLE,	APPROVED BY: R. K	OFR	ON,	CEG	
			SC	DLANA	BEACH, CALIFORNIA				G, INC.	
			Γ		DRILLING METHOD: 8-INCH HOLLOW S	TEM AUGER	<u> </u>			
					SAMPLER TYPE: SPLIT SPOON					
e:		_		8	TOTAL DEPTH: APPROXIMATELY 11 FE	ET BELOW GRADE		>	BORING	
/S P	(mg	m dd	4	E I	ELEVATION: FEET ABOVE MEAN			8	BACKFILL DETAIL	
BLOWS PER 6 INCHES	CGI (ppm)	TPH (ppm)	SAMPLE	DEPTH (Mg)	DEPTH TO GROUND WATER: APPROX.	FEET BELOW GRADE	uscs	ПТНОСОВУ	DETAIL	
	- 0	-	S		DESCRIPTION		Š	٦		
				├ °	Asphaltic concrete 2 inches thick. Hand augered to 5 feet below grade.			200000	0-	
			ļ		Than adjust to a reet below grade.				Concrete (1 bag)	
				L					\\ 	
				_2					2	
			1	_					-{**}}	
			L	-3	•				3-{22}	
	100		NR	_4	Loose maint light alive and /FVD policy	/ A 4 1 (b)				
			-	-	Loose, moist, light olive gray (5YR 5/2), fine-graine	G SAND WITH SHIL	SP		`Z**;	
			\vdash	-5	Loose, moist, black (N1), fine-grained SAND with s	ilt.			5	
3,1,2	220	ND		_ ₆	Sample B-26 - 6.	•••			Bentonite Grout	
			\vdash	_		. ·			(1 bag)	
1,1,1				-7	Loose, moist to wet, black (N1), silty, fine-grained S	:AND	SM		7	
	3,000	13,531			Sample B-26 - 7.5.	nito.	SM		+;;;;	
2,18*			П	-8-	Loose, wet, black (N1), silty, fine-grained SAND.				8-7:5:1	
,	1,000			_9					\ <u>`</u> ;``\	
			H	├				黚	1,7,7,1	
1,1,1	400	44		10	Soft, moist, black (N1), SILT.		ML		10 - [2 2]	
		14	Ш	Γ_{i_1}	Sample B-26 - 10.5.				11 - () ()	
				- 1					''	
				-12					12—	
				- -13						
							`		13 —	
1				-14					14	
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				 -15					15—	
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	<u></u>	LTON	L	I						
Á	A G	EOSC n Diego,	IEN	ICE	LOG OF EXPLORATO	RY BORING			B-26	
	WE 341	. Nego,	-dil	iorna			<u> </u>	!	PAGE 1 OF 1	

PR	PROJECT NO.: 600064-10			0	DATE DRILLED: OCTOBER 5, 1993						
LO	CATIO	N:	AR	cos	FATION 1919	LOGGED BY: G. BUCKNER					
		_	660) VIA I	DE LA VALLE,	APPROVED BY: R. K	OFR	ON,	CEG		
			SO	LANA	BEACH, CALIFORNIA	DRILLING CO.: H-F	DRIL	LIN	G, INC.		
					DRILLING METHOD: 8-INCH HOLLOW S	TEM AUGER					
1		ļ					SAMPLER TYPE: SPLIT SPOON				
E .	_			(ĝ	TOTAL DEPTH: APPROXIMATELY 11 FE	ET BELOW GRADE		≿	BORING BACKFILL		
NS H	CGI (ppm)	g	PLE	E	ELEVATION: FEET ABOVE MEAN	SEA LEVEL		ğ	DETAIL		
BLOWS PER 6 INCHES	SG	ТРН (ррм)	SAMPLE	ОЕРТН (Љg)	DEPTH TO GROUND WATER: APPROX. 7		nscs	ПТНО СОВУ			
-		-			DESCRIPTION		-	-			
				-°	Asphaltic concrete 2 inches thick. Hand augered to 5 feet below grade.				Concrete		
				– 1					1 — (1 bag)		
				-					 ***;		
				-2					2-(**)		
				– 3							
			\vdash	_		1					
	150		NR	-4	Loose, moist, light olive gray (5YR 5/2), fine-graine	d SAND with trace silt.	SP		4-\$\$\$\$		
				5					[二字***1		
1,2,1				-	Loose, moist, black (N1), sitty, fine-grained SAND.		SM		Bentonite		
		182		 6	Sample B-27 - 6.				6 - Grout (1 bag)		
1/18*	,		П	_ _7	Soft, moist, black (N1), SILT.		<u> </u>		1, 1; ; ; ;		
1/18	710,000	6,852			Sample B-27 - 7.5.		ML		/		
			Н	8	•		1		8		
1/18*	2,000				Soft, moist, black (N1), SILT.				1 - {**}}		
			Ш	_,					°		
1/18*				10	Soft, moist, black (N1), SILT.				10 - * * * * * * * * * * * * * * * * * *		
	200	126		_	Sample B-27 - 10.5.				11 - 2 2 2 3		
				_11				11111	11-1-1		
				_12					12		
				_			1				
		l		—13				l	13 —		
				14							
				-							
				15			1		15 —		
				- 1							
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		ł		-							
				_	. •						
		TON		L	1000==		+-	<u></u>	P 07		
	MA GE	OSC Diego,	IFR	ICE ornia	LOG OF EXPLORATO	RY BORING	1		B-27 PAGE 1 OF 1		
							<u> </u>				

ARCO STATION 1919 PROJECT: _ BORING DATE: __9/26/90

660 VIA DE LA VALLE, SOLANA BEACH BORING TYPE: HAND AUGER LOCATION:

GEOLOGIST: J. MEYER / J. GOODMACHER BORING NUMBER: PL-1

APPROXIMATELY 10 FEET DRILLING COMPANY: _ALTON GEOSCIENCE **ELEVATION: ABOVE MEAN SEA LEVEL**

DEPTH (feet) **BLOW CTS.** MATERIAL ENCOUNTERED USCS Dry to slightly damp, tan to gray, slightly clayey, micaceous, fine-to SP medium-grained SAND. Sample PL1-5. CGI = 5% LEL. TPH = 3,200 ppm. SP Slightly damp to damp, dark to moderate brown, fine- to medium-grained SAND. Sample PL1-9. CGI = 17% LEL. TPH = 21,000 ppm. Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete/bentonite grout.

TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

benzene toluene

ethylbenzene total xylenes

ND not detected at laboratory detection limits

Well elevations are measured to top of casing.

Characters in parentheses represent Munsell color code designations.

parts per million

CGITLY = combustible gas reading sampling interval

lower explosive limit

sample analyzed for hydrocarbons ground water piezometric surface

Total Depth = 9 Feet

PROJECT: ARCO STATION 1919	BORING DATE:
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: HAND AUGER
GEOLOGIST: J. MEYER / J. GOODMACHER	BORING NUMBER: PL-2
DRILLING COMPANY: ALTON GEOSCIENCE	APPROXIMATELY 10 FEET

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
- °				
-	'			
_				
-				
_				
_			Dry to slightly damp, $\tan to$ gray, slightly clayey, micaceous, fine- to medium-grained SAND. Sample PL2-5. CGI = 100 ppm. TPH < 10 ppm.	SP
 5 ++	_		modeling gramod Grand. Sample 1 22-5. GGI 2 100 ppm. 17-11 2 10 ppm.	
_				
_				
- -	\exists		Dry to slightly damp, tan to gray, slightly clayey, micaceous, fine- to	SP
++	Ц	<u>.</u>	medium-grained SAND. Sample PL2-9. CGI = 240 ppm. TPH < 10 ppm.	
_	İ		Total depth = 9 feet below grade.	
 10	ł		Boring was grouted from total depth to surface with concrete/bentonite grout.	
-				
	-			
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_				
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NOTES: TPH = total petroleum hydrocarbons ppm = parts per million
CGI/TLV = combustible gas reading
1 = sampling interval TRPH = total recoverable petroleum hydrocarbons = benzene = toluene lower explosive limit = ethylbenzene sample analyzed for hydrocarbons ground water piezometric surface X = total xylenes
\times \tim

Total Depth = 9 Feet

PROJECT: ARCO STATION 1919	BORING DATE:9/26/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BE	BORING TYPE: HAND AUGER
GEOLOGIST: J. MEYER / J. GOODMACHER	BORING NUMBER: PL-3
	APPROXIMATELY 10 FEET

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
_				:
_				
				•
_				
			Dry to slightly damp, tan to gray, slightly clayey, micaceous, fine- to	SP
 5 ++			medium-grained SAND. Sample PL3-5. CGI = 0 ppm. TPH = < 10 ppm.	
_				
·				
			Slightly damp, tan to gray, slightly oxidized, fine- to medium-grained SAND. Sample PL3-9. CGI = 95% LEL. TPH = 7,600 ppm.	SP
_ ++			Total depth = 9 feet below grade.	
- 10			Boring was grouted from total depth to surface with concrete/bentonite grout.	
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				<u>-</u> .
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	1			
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	- }			
NOTES: TOU		<u> </u>		

NOTES: TPH = total petroleum hydrocarbons TRPH = total recoverable petroleum hydrocarbons

В benzene toluene

ethylbenzene

DRILLING COMPANY: _ALTON GEOSCIENCE

X = total xylenes

ND = not detected at laboratory detection limits

Well elevations are measured to top of casing.

Characters in parentheses represent Munsell color code designations.

ppm = parts per million
CGI/TLV = combustible gas reading
| = sampling interval lower explosive limit

sample analyzed for hydrocarbons
 ground water piezometric surface

ELEVATION: ABOVE MEAN SEA LEVEL

Total Depth = 9 Feet

PROJECT: ARCO STATION 1919	BORING DATE:9/26/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: HAND AUGER
GEOLOGIST: J. MEYER / J. GOODMACHER	BORING NUMBER: PL-4
DRILLING COMPANY: ALTON GEOSCIENCE	APPROXIMATELY 10 FEET ELEVATION: ABOVE MEAN SEA LEVEL

DEPTH (feet)	-	BLOW CTS.	MATERIAL ENCOUNTERED	USCS
-				
_				
_				
_				
_	Т	Ì	Moist, gray, slightly silty, very fine- to fine-grained SAND. Sample PL4-5.	SP
5 ++	Щ		CGI = 450 ppm. TPH < 10 ppm.	0.
_				
-				
	\forall		Moist, gray, slightly silty, very fine- to fine-grained SAND. Sample PL4-9.	SP
_ ++	Щ		CGI = 40% LEL. TPH = 7,800 ppm.	
-			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete/bentonite grout.	
<u> </u>			and ground from total aspin to serious min solitoto, bolkonko groun	
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NOTES: TPH = total petroleum hydrocarbons TRPH = total recoverable petroleum hydrocarbons

B = benzene | I
T = toluene | LEL
E = ethylbenzene | ++
X = total xylenes | \frac{\text{V}}{\text{V}}

ND = not detected at laboratory detection limits

Well elevations are measured to top of casing.

Characters in parentheses represent Munsell color code designations.

ppm = parts per million
CGI/TLV = combustible gas reading
I = sampling interval
LEL = lower explosive limit

sample analyzed for hydrocarbonsground water piezometric surface

Total Depth = 9 Feet

PROJECT: ARCO STATION 1919	BORING DATE:9/26/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: HAND AUGER
GEOLOGIST: _J. MEYER / J. GOODMACHER	BORING NUMBER: PL-5
DRILLING COMPANY: ALTON GEOSCIENCE	APPROXIMATELY 10 FEET ELEVATION: ABOVE MEAN SEA LEVEL

DEPTH (feet) BLOW		BLOW CTS.	MATERIAL ENCOUNTERED	USCS
_				
-			·	
_		·		
]				
				
_				:
_			Slightly damp, gray orange, slightly silty, very fine- to fine-grained SAND.	SP
 5 ++	낵		Sample PL5-5. CGI = 0 ppm. TPH < 10 ppm.	
_				
	- [
-				
	_		D	
			Damp, orange, silty, slightly coarse, very fine- to medium-grained SAND. Sample PL5-9. CGI = 15% LEL. TPH = 240 ppm.	SM
_ ++			Total depth = 9 feet below grade.	_
10	Ì		Boring was grouted from total depth to surface with concrete/bentonite grout.	:
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_	- 1			
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_	1	İ		
_				- 1
NOTES: TDU	<u> </u>	otal potraleus	hudrooks	
NOTES: TPH TRPH	= t	otal recoverable	e petroleum hydrocarbons	Page 1 of 1
B T	= t	oenzene oluene	I = sampling interval LEL = lower explosive limit	

= ethylbenzene

X = total xylenes \frac{\times}{\times}

ND = not detected at laboratory detection limits

Well elevations are measured to top of casing.

Characters in parentheses represent Munsell color code designations.

sample analyzed for hydrocarbons ground water piezometric surface

Total Depth = 9 Feet

PROJECT: ARCO STATION 1919	BORING DATE: 9/26/90
LOCATION: 660 VIA DE LA VALLE, SOLANA BEACH	BORING TYPE: HAND AUGER
GEOLOGIST: J. MEYER / J. GOODMACHER	BORING NUMBER: PL-6
DRILLING COMPANY: _ALTON GEOSCIENCE	APPROXIMATELY 10 FEET ELEVATION: ABOVE MEAN SEA LEVEL

DEPTH (feet)	1	BLOW CTS.	MATERIAL ENCOUNTERED		uscs
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-					
-					
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-					İ
-			Climbely dama grow ails, war, fine to fine analysis CAND.	lamala DI C E	
•			Slightly damp, gray, silty, very fine- to fine-grained SAND. S CGI = 25% LEL. TPH = 800 ppm.	атрів Рьь-5.	SM
-5 ++					1
'					
•					
			Damp, gray, silty, very fine- to medium-grained SAND. Sam	ple PL6-9.	SM
			CGI = 350 ppm. TPH = 150 ppm.	•	"
++:				•	
. ++			Total depth = 9 feet below grade.		
. ++ — 10			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
,			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Boring was grouted from total depth to surface with concrete	e/bentonite grout.	
•			Total depth = 9 feet below grade. Boring was grouted from total depth to surface with concrete	e/bentonite grout.	

NOTES: TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

= benzene

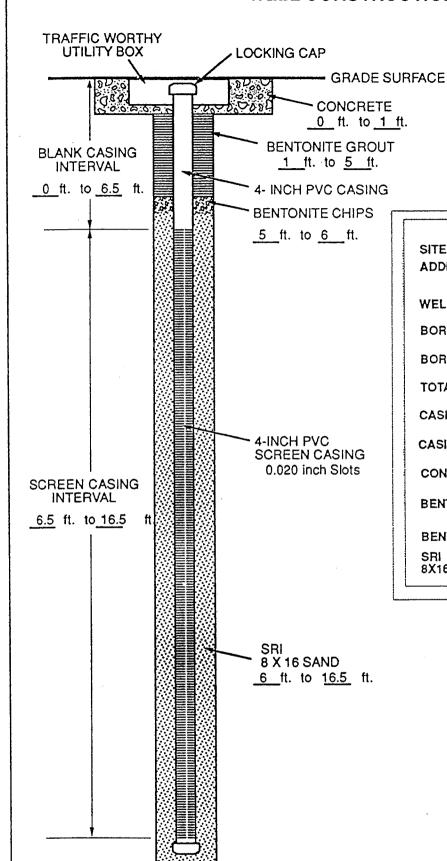
toluene

ppm = CGI/TLV =

parts per million combustible gas reading sampling interval

lower explosive limit sample analyzed for hydrocarbons ground water piezometric surface

Total Depth = 9 Feet



SITE: **ARCO STATION 1919** 660 Via de la Valle ADDRESS: Solana Beach, California <u>MW-</u>15 WELL NUMBER: 02/13/92 BORING DATE: 10 BORING DIAMETER: 16.5 ft. TOTAL BORING DEPTH: ____ 4 CASING DIAMETER: 16.5 CASING/SCREEN DEPTH: ____ 2 CONCRETE: _ bags 2 bags BENTONITE GROUT: BENTONITE CHIPS: 1_____ bags SRI 8X16 SAND bags

<u>LEGEND</u>

000

CONCRETE



BENTONITE GROUT

BENTONITE CHIPS



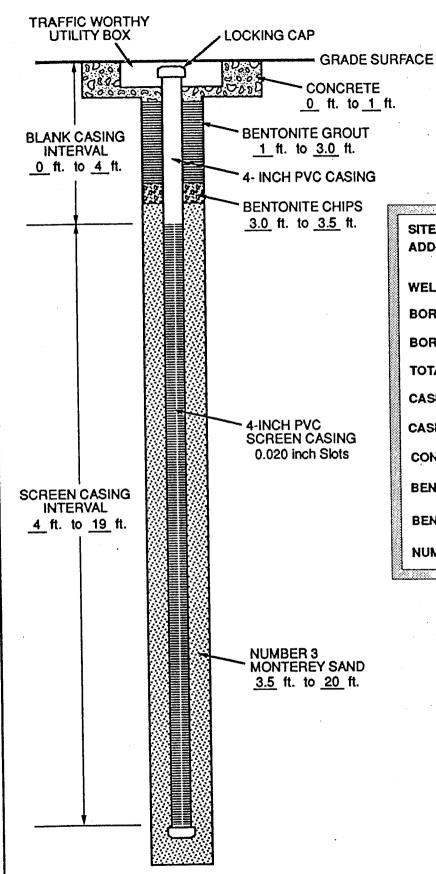
FILTER PACK SRI 8X16 SAND

NOTE: DRAWING IS NOT TO SCALE



ALTON GEOSCIENCE 5764 PACIFIC CENTER BLVD. SUITE 101 SAN DIEGO, CA 92121

600077-20-SC1 10-31-91



SITE: **ARCO STATION 1919** 660 Via de la Valle ADDRESS: Solana Beach, California MW-17 **WELL NUMBER:** 7/22/92 **BORING DATE:** 10 **BORING DIAMETER:** 20 TOTAL BORING DEPTH: _ 4 CASING DIAMETER: 19 CASING/SCREEN DEPTH: _____ 2 **CONCRETE:** _ bags **BENTONITE GROUT:** bag 0.5 BENTONITE CHIPS: . bag NUMBER 3 SAND: bags

LEGEND

000

CONCRETE



BENTONITE GROUT

0.00

BENTONITE CHIPS



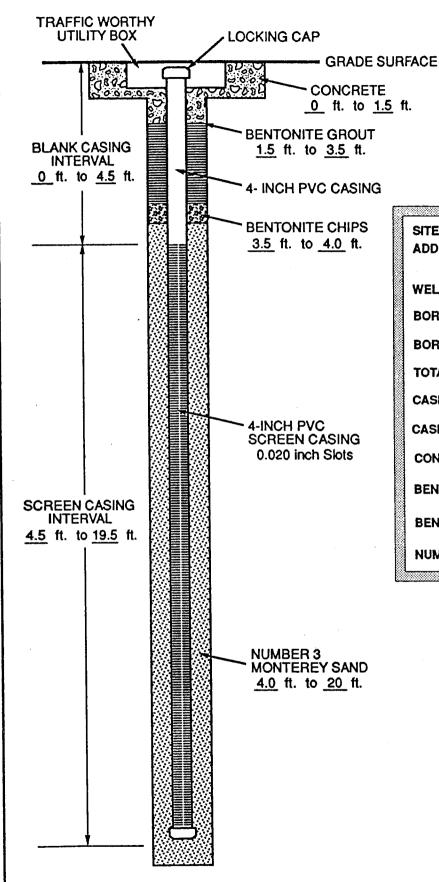
FILTER PACK (NUMBER 3 MONTEREY SAND)



ALTON GEOSCIENCE 5764 PACIFIC CENTER BLVD. SUITE 101 SAN DIEGO, CA 92121

NOTE: DRAWING IS NOT TO SCALE

600064-21-SC2 8-31-92



SITE: **ARCO STATION 1919** 660 Via de la Valle ADDRESS: Solana Beach, California MW-18 **WELL NUMBER:** 7/23/92 **BORING DATE:** 10 **BORING DIAMETER:** _ In. 20 TOTAL BORING DEPTH: __ ft. CASING DIAMETER: 4 in. CASING/SCREEN DEPTH: _____19.5 2 CONCRETE: _ bags **BENTONITE GROUT:** _ bag 0.5 BENTONITE CHIPS: _ bag NUMBER 3 SAND: 7.5 bags

LEGEND

10,00

CONCRETE



BENTONITE GROUT

44.66

BENTONITE CHIPS



FILTER PACK (NUMBER 3 MONTEREY SAND)

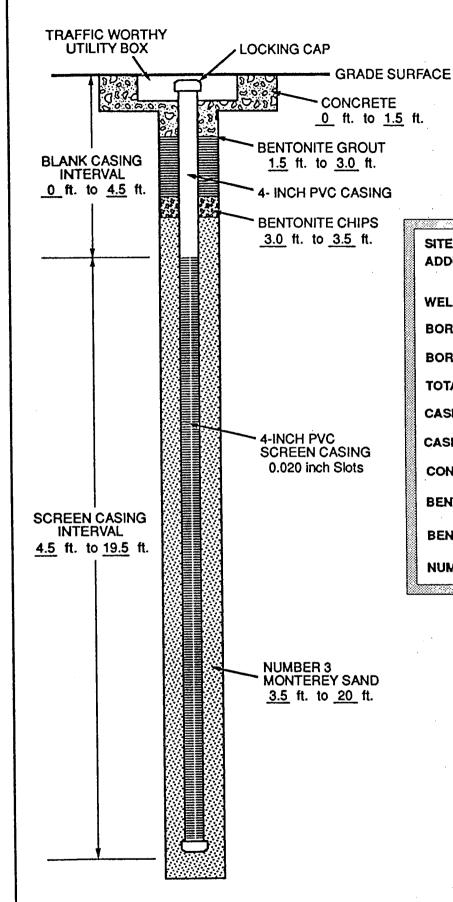


ALTON GEOSCIENCE

SUITE 101 SAN DIEGO, CA 92121

NOTE: DRAWING IS NOT TO SCALE

600064-21-SC2 8-31-92



SITE: **ARCO STATION 1919** 660 Via de la Valle ADDRESS: Solana Beach, California MW-19 WELL NUMBER: 7/23/92 **BORING DATE:** 10 **BORING DIAMETER:** _ in. 20 TOTAL BORING DEPTH: _ 4 CASING DIAMETER: 19.5 CASING/SCREEN DEPTH: _____ 2 CONCRETE: _ bags BENTONITE GROUT: 1_ _ bag 0.5 BENTONITE CHIPS: bag NUMBER 3 SAND: 7.5 bags

LEGEND

Cost

CONCRETE



BENTONITE GROUT

BENTONITE CHIPS



FILTER PACK (NUMBER 3 MONTEREY SAND)



ALTON GEOSCIENCE 5764 PACIFIC CENTER BLVD.

SUITE 101 SAN DIEGO, CA 92121

600064-21-SC2 8-31-92

NOTE: DRAWING IS NOT TO SCALE

PRO	PROJECT NO.: 600064-52					DATE DRILLED: APRIL 13 1994				
LOC	ATION	: /	AR	CO S1	FATION 1919	LOGGED BY: G. BU			·	
		6	60	VIA [DE LA VALLE,	APPROVED BY: R. KC	FRO	ON, C	CEG	
			<u>SO</u>	LANA	BEACH, CALIFORNIA	DRILLING CO.: WES	ГНА	ZM/	AT DRILLIN	IG
					DRILLING METHOD: 10-INCH-DIAMETER	HOLLOW STEM AUGER	Γ	T	T	
				1	SAMPLER TYPE: 2-INCH-DIAMETER SE	····	İ			
E .		TOTAL B		9	TOTAL BORING DEPTH: APPROX. 16 F	EET BELOW GRADE		_		ELL RUCTION
AS P) mod	1 e 1 P		ELEVATION: 16.82 FEET ABOVE MEAN	SEA LEVEL	l	8	•	TAIL	
BLOWS PER 6 INCHES	CGI (ppm)	F	SAMPLE	EPT	DEPTH TO GROUND WATER: APPROX.	10.5 FBG ON 4-13-94	итнособу			
	+	-	╀	-0	DESCRIPTION		iscs	-	Standa	rd cover with
				F	Hand excavated to approximately 5 feet below gra- Asphaltic concrete 3 inches thick.	de.			٥	locking cap
				-1	TORREY SANDSTONE.				1 -	(1 bag) 2-inch-
				-2					- : :	diameter Schedule 40
	ŀ			Ľ	Dense, moist, very pale orange (10YR 8/2), gravel	ly, cobbly, fine-grained SAND.	SP		2	PVC casing: Bentonite
				- 3					نا ند و	Grout (0.5 bag)
				-						Bentonite Chips
				L ⁴					4-11	(1 bag).
75/5*	20		L	5	Von done maint van alle aven a (ANC) our					
/5/5	20		Н	╬	Very dense, moist, very pale orange (10YR 8/2), fil	ne-grained SAND.				
1				-6	*				6 —	
				L ₇						
10,18,21	15	ND	H	+	Deepe majet very rele errore (10VD Rm) 5	-1 104115				2-inch- dlameter
			Ш	- 8	Dense, moist, very pale orange (10YR 8/2), fine-gr. Sample MW-19 - 8.	ained SAND, trace silt.			8 —	Schedule 40 PVC casing with 0.020
			$\ \ $	L.						inch slotting
60,13,40	20		П	T,	As above.				9 1 11	
		ND	$\ \ $	- 10	Sample MW-19 - 10.		·		10	
14,19,25	>10,000		H	- -	·					
		5,763		L 11	Medium dense, wet, black (N1), fine-grained SAND Sample MW-19 - 11.5.), trace silt.			11-	Na. 3 Monterey
7,10,17	>10,000		\coprod	12	Medium dense, wet, black (N1), fine-grained SAND				12	Sand (5 bags)
7,10,17	>10,000	9,379	$\ \ $	-	Sample MW-19 - 12.5. B = ND, T = ND, E = 104 p	opm, X = 428.5 ppm.				
			$\ \ $	- 13					13 —	
			Γ	L ₁₄						
			Ì	-						
32,50	20		Н	15	Very dense, wet, very pale orange (10YR 8/2), fine	-grained SAND.			15 —	
	:	ND	Ш	- - 16-	Sample MW-19 - 15.5.				一題	End cap
					Refusal at 16.				16	cito cap
		-		-17	-	-			17-	
					***				-	
				[•				
				-			[
				-						
, m	A1 =		<u> </u>					 		
	ALT	SCIE	Ņ	CÉ	LOG OF EXPLORATO	ORY BORING			MW-1	93
	SA San D	iego, C	alifo	rnia					PAGE 1 O	F 1

	ALTON GEOSCIENCE San Diego, California LOG OF EXPLORATO					DRY BORING			MW-20 PAGE 1 OF		
2,3,4			Ι	19 20	Loose, wet, light gray (N7), fine-grained SAND, wit	h silt.	SP		19 En	od cap	
		•		— 17 — — 18 —		·			17—	•	
3,4,5		ND		— 15 — — 16 —	Loose, wet, light gray (N7), silty, fine-grained SANI Sample MW-20 - 15.	D.	SM		15 —	7,	
3,3,4		,		13 14	Soft, wet, black (N1), SILT.		ML		I '⁴ Totto Sa	riterey	
				11 12			-		11 —		
	:	2,593		- 9 - 10	As above, wet. Sample MW-20 - 9.	•			9 — Ei Sch	hedule 40 C casing h 0.020- h slotting	
1,1,2		ND		_ _ 7 _ _ 8\ <u>_</u>		ID.	ѕм			nch- meter	
8,4,5	·	ND		_ 5 _ _ 6	As above. Sample MW-20 - 6.	·			5 — 6 —		
				- 4 - 4	QUATERNARY ALLUVIUM.				Ber Gri		
				- -2 - -3	Medium dense, moist, very pale orange (10YR 8/2), fine-grained SAND.	SP		2 - V Scr PV V Ber V Gro V (0.5	meter nedule 40 C casings ntonite out 5 bag)	
				-0 - -1	Hand excavated to approximately 5 feet below grades Asphaltic concrete 3 inches thick. Fill.	de.			1 — Cor (1 to 2-ir	king cap ncrete pag) nch-	
BLOWS PER 6 INCHES	CGI (ppm)	TPH (ppm)	SAMPLE	DEPTH (fbg)	DEPTH TO GROUND WATER: APPROX. DESCRIPTION		nscs	итнососу	DETA	IL	
en S		-		(Bq	SAMPLER TYPE: 2-INCH-DIAMETER SF TOTAL BORING DEPTH: APPROX. 20 F	PLIT-SPOON EET BELOW GRADE		34	WELI CONSTRU		
	1	<u>`</u>	T		DRILLING METHOD: 10-INCH-DIAMETER	DRILLING CO.: WEST HAZMAT DRILLING					
					DE LA VALLE, BEACH, CALIFORNIA	APPROVED BY: R. KO					
	ATION:	A	RC	O ST	ATION 1919 -	DATE DRILLED: APRIL 13 1994 LOGGED BY: G. BUCKNER					
PRO	JECT N	10.: A	റവ	064-5	2	DATE DRILLED, ADDIL	12	1004			

PRO	JECT	NO.: (600	064-5	2	DATE DRILLED: APRIL	- 13	1994	1	··· ··		
LOC	CATION	l: /	ARC	CO ST	TATION 1919	LOGGED BY: G. BUCKNER						
			-		DE LA VALLE,	APPROVED BY: R. KO	FRO	ON, C	CEG	 		
			SOL	ANA	BEACH, CALIFORNIA	DRILLING CO.: WEST HAZMAT DRILLING						
					DRILLING METHOD: 10-INCH-DIAMETER	HOLLOW STEM AUGER			<u> </u>			
			ı		SAMPLER TYPE: 2-INCH-DIAMETER SF	PLIT-SPOON						
监		_		क्रि	TOTAL BORING DEPTH: APPROX. 14 F	EET BELOW GRADE	l		4	ELL RUCTION		
NS P	P G	l md	Ä	분	ELEVATION: 13.78 FEET ABOVE MEAN			8	1	HUCTION		
BLOWS PER 6 INCHES	CGI (ppm)	ТРН (ррм)	SAMPLE	DEPTH (fbg)	DEPTH TO GROUND WATER: APPROX.	8 FBG ON 4-13-94	uscs	LITHOLOGY				
-	 	+-	+	┼ <u></u>	DESCRIPTION		ă	٦		·		
			İ	F°	Hand excavated to approximately 5 feet below grad Asphaltic concrete 3 inches thick.	de.	<u> </u>		o — Standa	rd cover with locking cap Concrete		
	ļ	-		-1	TORREY SANDSTONE.	•			1 - 0	(1 bag) 2-inch-		
				-2					- : :	diameter Schedule 40		
				<u> </u>	Dense, moist, light brown (5YR 5/6), fine-grained S	AND, trace silt.	SP		2	PVC casings Bentonite		
			1	- 3					3 - 2 2	Grout (0.5 bag)		
				上,	·	·				Bentonite Chips		
		1	Ì	⊢ ⁴					4-19 19	(1 bag)		
10,16,33	20		-	5	Dense moist very pale crange (10VB 8/0) 5-5-5-	ation of OANID Annual villa			5 1			
				F 1	Dense, moist, very pale orange (10YR 8/2), fine-gra	ained SAND, trace silt.						
		ļ	Ш	6					6 —			
				7								
15,31,46	25	ND	\vdash	┝ͺͺ	Dense, wet, light brown (5YR 5/6), fine-grained SAI	ND, trace silt				2-inch- diameter		
	. 10 000	10 400	$\ \ $	- 8∑	Sample MW-21 - 7.5.	,			8 - []	Schedule 40 PVC casing with 0.020-		
	>10,000	13,460	Ш	L ₉	No. of the second					inch slotting		
8,9,12	750			-	Medium dense, wet, black (N1), fine-grained SAND Sample MW-21 - 8.5. B = 28.2 ppm, T = 182.1 ppm	, with silt. m, E = 116.9 ppm,						
	750			-10	X = 783.6 ppm.	••			10 —			
				-11								
				_'`						No. 3 Monterey Sand		
32,41,50	5	29		- 12	Dense, wet, very pale orange (10YR 8/2), fine-grain	ed SAND, trace silt.			12 - 1	(5 bags)		
				١ ا	Sample MW-21 - 12.	•						
			Щ	13 					13 —			
				- 14 -					14	End cap		
				-					-			
				15 					15-			
				- 16					16—			
		-		-								
				— 17 —					17—			
				_	•••							
				-								
				_					-			
				_					-			
	ALT							┟─┤	RAVA!			
GEOSCIENCE LOG OF EXPLORA				LOG OF EXPLORATO	RY BORING			MW-2				
								<u> </u>	PAGE 1 O	r 1		

	CE	CO	D		BOREHOLE / WELL LOG					M	MW-22			
	OE		X		Client:		A	RCO	Job No: 008.600	73	Sheet: 1 of 1			
	Levin		roved by:		Location	Arco Facility No. 1919 660 Via de la Valle Solana Beach, CA Tri-County Drilling In Daniel Nichols								
Date Started		Date Finished	-		5 with H	pling Method: with Hollow Stem Augers/CA Split Spoon Sampler with Sleeves Borehole Dia.: Casing Dia:. 8" 2"						Elevation: 9.81		
	SAMPLE LO					BOREHOLE LOG						WELL LOG		
Sample Number	OVA/PIC (ppm)	Lab Results TPHg(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	USCS Graphic Geologic Description						Well Design		
				1 2	SW			6" Asphalt, 6" Base Well graded SAND, d 4/6), fine to coarse gradry, loose, no Hydroca	ined sand, tra	ce of silt	10YR : (<10%),			
MW-22/5'	1.8	<10	1/2/2	3 4 5 6 7 8	SM		—	Silty SAND, dark red grained sand, with occ sand, silt (15-20%), traloose, no HC odor.	dish brown (5	YR 3/2) ım grain	ed			
MW-22/10'	0.8	<10	4/3/2	1 2	ML			Sandy SILT, black (5' grained sand, wet, firm	Y 2.5/1), 60% n to stiff, no I	silt, 409	 % fine			
MW-22/15'	NA		4/6/15	3 4 15 6 7	SP			Poorly graded SAND, 3/1), fine to medium medium dense, slight	grained sand,	silt (10%	6), wet,			
MW-22/20'	0.6		5/7/10	8 9 20				Strong odors (organic/	'hydrogen sul:	fide).				
				1				TOTAL DEPTI Borehole complete Monitoring well w 6 bags of #3 Mont bgs, 1 bag of hydr 2' - 4' bgs and capp traffic rated well b	ed as 2" diamerith 0.020" sloerey Sand from the cared bentonited bed with conc	eter PVC otted scre m 4' - 20 chips fi	en,).5' com			

Number:

	CL	CO	D			BOKEHOLI	L LOG		MW-23		
	OL		K		Client:	ARCO		Job No: 008.600	73 Sheet		
SECOR Rep	e: Levin	Арр	roved by:		Location	Arco Facility No. 660 Via de la Va Solana Beach, C	lle	Drilling Company/Driller: Tri-County Drilling Inc./ Daniel Nichols			
Date Started	l:	Date Finished	l:		Sampling M		Borehole Dia.:	Borehole Dia.: Casing Dia:. Surface I			
7/11/		7/11/	00	CME-7	75 with H	ollow Stem Augers/CA ampler with Sleeves	Split Spoon	8"	i i		
	SAMPLE LO					BOREH	OLE LOG			WELL LO	
Sample Number	(ppm)	Lab Results TPHg(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log (Soil Type	Geol e, Color, grain, minor	ogic Description soil component, mois	ture, density, odor,	well Design	
				0		6" Asp	halt, 6" Base			TT:	
				3	SW	4/4), fi	ne to coarse gr drocarbon (HC		t (5-10%), dr	R	
MW-23/5' 0.6 <10 5/6/13			5	SM	graine no ode	d sand, silt (25.	rk gray (5YR 3 -30%), moist, r	3/1), fine nedium dens	e,		
MW-23/10' 2.0 <10 1		1/2/2	9 10 1	 ML	Sandy grained	SILT, black (5 d sand (30%), t	Y 2.5/1), 60% race clay, wet,	silt, fine	rs.		
MW-23/15'	0.2		1/1/2	2 3 4 15	SP	Poorly grained	graded SAND i sand, silt (10-	, black (5Y 2.5 15%), wet, so	 5/1), fine ft, no odors.		
MW-23/20'	0		8/20/24	7 8 9		Becom	es dense to ver	y dense.			
			oj auj <u>e</u> ri	1 2 3 4 4 25 6 7 8 9 9		Box Mo wit bgs	rehole complet mitoring well v h 6 bags of #3 , 1 bag of Bent	H = 20.5 FEET ed as 2" diame with 0.020" slow Monterey Sand tonite seal fron rete and traffic	eter PVC tted screen, d from 4' - 20 n 2' - 4' bgs a	nd H	

Number:

Number: BOREHOLE / WELL LOG MW-24 SECOR Client: ATLANTIC RICHFIELD COMPANY Sheet: 008.01919.03 1 of 1 Location: Arco Facility #1919 Drilling Company/Driller: 660 Via de la Valle SECOR Rep: West Hazmat Drilling Company/ Approved by: Solana Beach, CA 92075 Robert Suffle M. Garrett/C. Rodriguez Brad Eisenberg Well at: 2260 Jimmy Durante Blvd, Del Mar, CA Top of Casing Elevation: Date Started: Casing Dia:. Date Finished: Drill Rig/Sampling Method: Borehole Dia .: CME-75 with Hollow Stem Auger/ CA Split Spoon ייא 2" 8.83' MSL 10-1-03 10-1-03 Sampler with Sleeves SAMPLE LOG WELL LOG BOREHOLE LOG Density Blows/ft Depth in Feet Graphic Log Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.) Sample OVA/PID Lab Results USCS Well Number TPH(ppm) Symbol Design (mgg) Asphalt 5" PAVEMENT: Base 5" ALLUVIUM: SM/CI Clayey silty SAND to silty SAND with clay, olive green (5Y 4/2) to yellowish brown (10YR 5/6), fine grained sand, micaceous, moist, dense, no CL hydrocarbon (HC) odor, interlayed with clay, dark yellowish brown (10YR 3/6), fine grained sand, SMmoist, dense, no HC odor Sandy CLAY, dark olive brown (2.5Y 3/3) to dark MW-24-5' <10 6 CH olive (5Y 3/2), very fine grained sand, moist, firm, no HC odor Silty SAND, black (2.5Y 2.5/1) to (3.5Y 2.5/1), fine to very fine grained sand, moist, loose, no HC odor, micaceous High plasticity CLAY, black (2.5Y 2.5/1), moist, 10 firm to soft, with organic debris (roots) and MW-24-10.5 8.1 <10 9 SM decomposing organic (sewer like) odor Silty SAND, olive gray (5Y 4/2), fine to very fine grained sand, micaceous, wet, loose, no HC odor. Becomes black (2.5Y 2.5/1), medium dense. MW-24-15.5 7.7 <10 20 20 Becomes dark olive gray (5Y 3/2), very fine grained MW-24-20.5 43 <10 23 sand, poorly graded, micaceous, moist TOTAL DEPTH DRILLED = 21.5' BGS GEC Boring terminated at predetermined depth. Groundwater encountered at 4 feet during drilling. Groundwater measured at 4.64 feet below top of BRADLEY & **FISENBER** casing in completed well on 11-21-03. Boring completed as a 2" diameter schedule 40 PVC No monitoring well with 0.020-inch slotted screen interval from 2.5 to 17.5 feet bgs, blank casing from ground surface to 2.5 feet bgs, #3 Monterey sand filter pack from 2 to 21.5 bgs, bentonite chips from 1 to 2 feet bgs, and completed with a traffic rated well box set in reinforced concrete from ground surface to 1 foot bgs.

BOREHOLE / WELL LOG MW-25 SECOR Client: ATLANTIC RICHFIELD COMPANY Sheet: Job No: 008.01919.03 1 of 1 Location: Arco Facility #1919 Drilling Company/Driller: 660 Via de la Valle SECOR Rep: West Hazmat Drilling Co./ Approved by: Solana Beach, CA 92075 Robert Suffle M. Garrett/C. Rodriguez Brad Eisenberg Well at: 2260 Jimmy Durante Blvd, Del Mar, CA Top of Casing Elevation: Date Started: Casing Dia:. Date Finished: Drill Rig/Sampling Method: Borchole Dia.: CME-75 with Hollow Stem Auger/ CA Split Spoon 8" 10-1-03 10-1-03 7.21' MSL Sampler with Sleeves SAMPLE LOG BOREHOLE LOG WELL LOG OVA/PID Lab Results Density Depth USCS Graphic Geologic Description Well Sample Number (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.) TPH(ppm) Blows/ft Symbol Design (maga) in Feet Log Asphalt 5" PAVEMENT: Base 5" CH ALLUVIUM: AUGER SM CLAY, black (5Y 2.5/1), high plasticity, moist, firm, decomposed (septic like) odor CH Silty SAND, olive gray (5Y 4/2), fine to very fine grained sand, micaceous, moist, medium dense, no ∇ 4.3 <10 hydrocarbon (HC) odor CLAY, black (5Y 2.5/1), high plasticity, moist, firm, MW-25-51 12 <10 12 SM no HC odor, some roots At 3 feet bgs encountered roots and pieces of wood At 5 feet bgs becomes dark gray (5Y 4/1), damp, firm, no HC odor Silty SAND, black (5Y 2.5/1), very fine to fine grained sand, micaceous, moist, loose to medium dense, no HC odor At 10 feet bgs becomes olive gray (5Y 4/2) MW-25-10.5 7 <10 Becomes dark olive gray (5Y 3/2), wet MW-25-15.5 <10 19 BRADLEY G EISENBERG 20 No recovery na 16 TOTAL DEPTH DRILLED = 21.5' BGS Boring terminated at predetermined depth. Groundwater encountered at 4.5 feet during drilling. Groundwater measured at 3.21 feet below top of 25 casing in completed well on 11-21-03. Boring completed as a 2" diameter schedule 40 PVC monitoring well with 0.020-inch slotted screen interval from 2.5 to 17.5 feet bgs, blank casing from ground surface to 2.5 feet bgs, #3 Monterey sand filter pack from 2 to 21.5 bgs, bentonite chips from 1 to 2 feet bgs, and completed with a traffic rated well box set in reinforced concrete from ground surface to 1 foot bgs. 30

Number:

SECOR

BOREHOLE/WELL LOG

Number:

Sheet:

MW-26

Client: ATLANTIC RICHFIELD COMPANY

008.01919.03

1 of 2

SECOR Rep:

M. Garrett/C. Rodriguez

Approved by:

Brad Eisenberg

Arco Facility #1919 660 Via de la Valle Solana Beach, CA 92075 Drilling Company/Driller:

West Hazmat Drilling Company/ Robert Suffle

Date Started: 10-2-03 Date Finished:

Drill Rig/Sampling Method:

Location:

CME-75 with Hollow Stem Auger/ CA Split Spoon

Borehole Dia.:

Casing Dia:.

Top of Casing Elevation: 29.82' MSL

10-2-0	,,	10-2-	U3			Sampler	with S	Sleeves 8" 2" 29.82"	MPL				
S	AMPLE LOC	7			Denth USCS Graphic Geologic Description								
Sample Number	OVA/PID (ppm)	Lab Results TPH(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphi Log	c	Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.)	Well Design				
				0-		le west		PAVEMENT: Asphalt 2"					
	14.6	na	75-12"	3 4 5 6				TORREY SANDSTONE: Silty SANDSTONE, yellow (10YR 7/6), fine to very fine grained sand, poorly sorted, some subangular 1" gravel, moist, moderately cemented, no hydrocarbon (HC) odor Brownish yellow (10YR 6/8), very fine grained sand, strongly cemented					
√W-26-10.5°	16.3	<10	75-12"	7 8 9 10 1 2 3	(TORREY SANDSTONE)								
	23.2	na	50-6"	15 6				Reddish yellow (7.5 6/8), hard					
MW-26-20.5	12.9	<10	90-12"	20				Brownish yellow (10YR 6/8), very fine grained sand					
	7.7	na	50-6"	25			₹	Sandy SILTSTONE, light greenish gray (5GY 7/1) to brownish yellow (10YR 6/8), very fine grained sand, poorly sorted, weakly cemented, moist, hard, no HC odor.					
MW-26-30.5	12	<10	90-12"	30									

Number: BOREHOLE / WELL LOG MW-26 SECOR Client: ATLANTIC RICHFIELD COMPANY Sheet: 008.01919.03 2 of 2 Drilling Company/Driller: Arco Facility #1919 Location: 660 Via de la Valle West Hazmat Drilling Company/ SECOR Rep: Approved by: Solana Beach, CA 92075 Robert Suffle M. Garrett/C. Rodriguez Brad Eisenberg Well at: 674 Via de la Valle, Solana Beach, CA Top of Casing Elevation: Borehole Dia.: Casing Dia:. Date Finished: Drill Rig/Sampling Method: Date Started: CME-75 with Hollow Stem Auger/ CA Split Spoon 29.82' MSL ጸዛ 2" 10-2-03 10-2-03 Sampler with Sleeves WELL LOG SAMPLE LOG BOREHOLE LOG OVA/PID USCS Graphic Geologic Description Well Lab Results Density Sample Depth Design (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.) Number (ppm) TPH(ppm) Blows/ft in Feet Symbol Log TORREY SANDSTONE (CONT.): 30 Sandy SILTSTONE, greenish gray (10GY 5/1), very fine grained sand, poorly sorted, strongly cemented, moist, hard, no HC odor MW-26-35' 8.1 па 50-6" Silty SANDSTONE, yellowish red (5YR 5/6), fine to very fine grained sand, trace clay, poorly sorted, moist, strongly cemented, no HC odor 40 MW-26-401 94 <10 50-6" SILTSTONE, greenish black (10GY 2.5/1), well cemented, wet, hard, no HC odor, with pink streaks (5YR 8/4) of silt containing calcium carbonate TOTAL DEPTH DRILLED = 40.5' BGS Boring terminated at predetermined depth. Groundwater encountered at 40 feet during drilling. Groundwater measured at 24.4 feet in open borehole after 20 minutes. Groundwater measured at 23.93 feet below top of casing in completed well on Boring caved to 38 feet bgs. Boring completed as a 2" diameter schedule 40 PVC monitoring well with 0.020-inch slotted screen interval from 19 to 34 feet bgs, blank casing from ground surface to 19 feet bgs, 3/8" bentonite pellets from 36 to 38 feet bgs, #3 Monterey sand filter pack from 17 to 36 feet bgs, 3/8" bentonite pellets from 11 to 17 feet bgs, bentonite grout from 3 to 11 feet bgs, and completed with a traffic rated well box set in reinforced concrete from ground surface to 3 feet bgs. BRADLEY G EISENBE

DEFINITION OF TERMS

	PRIMARY DIVISIO	NS	GRAPHIC SYMBOL	GROUP SYMBOL	SECONDARY DIVISIONS
		Clean Gravels (Less Than 5%		GW	Well graded gravels, gravel-sand mixtures, little or no fines.
۳ =	GRAVELS More Than Half Of Coarse	Fines)		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
SOILS al Is Large Size	Fraction Is Larger Than No. 4 Sieve	Gravel With	00000 00000 00000 00000 00000 00000	GM	Clayey gravels, gravel-sand-clay mixtures, non-plastic fines.
RAINEL Of Materia 200 Sieve		Fines		GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
COARSE GRAINED SOILS More Than Half Of Material Is Larger Than No. 200 Sieve Size	SANDS	Clean Sands (Less Than 5%		sw	Well graded sands or gravelly sands, little or no fines.
CO More	More Than Half Of Coarse	` Fines)		SP	Poorly graded sands or gravelly sands little or no fines.
	Fraction Is Smaller Than No. 4 Sieve	Sands With		SM	Silty sands, sand-silt mixtures, plastic fines.
		Fines		SC	Clayey sands, sand-clay mixtures, plastic fines.
	SILTS ANE) CLAYS		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
OILS Is Smaller Size	Liquid Li Less Tha	mit Is n 50%		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
FINE GRAINED SOILS Than Half Of Material Is Smaller Than No. 200 Sieve Size				OL	Organic silts and organic silty clays of low plasticity.
E GRAI an Half Of ian No. 20	SILTS AND	O CLAYS		МН	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils elastic silts.
FINE GR. More Than Half Than No.	Liquid Li Greater Th	mit Is		СН	Inorganic clays of high plasticity, fat clays.
				ОН	Organic clays of medium to high plasticity, organic silts.
	HIGHLY ORGANIC S	OILS		Pt	Peat and other highly organic soils.
	·		, 4000000000 000000000000000000000000000	Dg	Decomposed granite.

SECOR

INTERNATIONAL INCORPORATED 2655 CAMINO DEL RIO N., SUITE 302 SAN DIEGO, CA. 92108 BOREHOLE/WELL LOG LEGEND

GRAIN SIZES

		U.S. Sta	andard Series S		Clear Square Sieve Openings				
	200 40 10				4 3	/4" 3	3" 1	2"	
SILT and CLAYS			SAND		GRA	AVEL	COBBLES	BOULDERS	
OILT BIR OLATO		Fine	Medium	Coarse	Fine	Coarse			

RELATIVE DENSITY

Sand and Gravels	Blows/Foot†
Very Loose	0 - 4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

CONSISTENCY

Silt and Clays	Strength ‡	Blows/Foot [†]
Very Loose	0 - 1/4	0-2
Soft	1/4 - 1/2	2 - 4
Firm	1/2 - 1	2 - 4
Stiff	1-2	8 - 16
Very Stiff	2-4	16 - 32
Hard	Over 4	Over 32
1		

- Number of blows of 140 pound hammer falling approximately 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) standard pentetration test (SPT) split spoon (ASTM D-1586).
- [‡] Unconfined compressive strength in tons/sq.ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

Graphic Log Symbols



A Liquid-Phase Hydrocarbons/ Phase Separated Hydrocarbons



Ground Water (Static)



Ground Water (First Encountered)

Well Design Symbol



Centralizer

Abbreviations Used

Mean Sea Level

A/C Asphalt/Concrete

Bentonite

Below Ground Surface

dia Diameter

Feet

LPH Liquid-Phase Hydrocarbons

Phase Separated Hydrocarbons

Groundwater

Hydrocarbon

Inches

med Medium

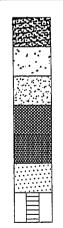
mod Moderate

NA Not Analyzed

NR Not Recorded

ppm Parts Per Million

Well Design Fill Patterns



Asphalt

Concrete

Concrete Slurry

Bentonite

Bentonite Grout

Sand

Screened interval

INTERNATIONAL INCORPORATED 2655 CAMINO DEL RIO N., SUITE 302 SAN DIEGO, CA. 92108

BOREHOLE/WELL LOG LEGEND

Page 2 of 2

Number: BOREHOLE/WELL LOG SECOR SP-1 Client: Job No: 1 of 1 ARCO Products Co. 80600-018-07 Location: Drilling Company/Driller: Facility No. 1919 SECOR Rep: West Hazmat Drilling Corp./Dan Patrick McConnell 660 Via De La Valle **Nichols** Solana Beach, Ca. Date Started: Date Finished: Drill Rig/Sampling Method: Borehole Dia.: Casing Dia.: Surface Elevation: 3/28/95 3/28/95 CME 75HT / Hollow Stem Auger / Split Spoon 1" SAMPLE LOG WELL LOG BOREHOLE LOG OVA/PID Lab Results Density Sample USCS Depth Geologic Descripton (Soil Type, color, grain, minor soil component, moisture, density, odor, etc.) Graphic Well Number (ppm) (ppm) Blows/ft in Feet Symbol Log SP SAND, dark olive gray (5Y 4/2), 90% fine to medium sand, 5% Silt, 5% fine gravel, slightly moist, loose, Moderate HC odor SP-1/5' 550 30 SP SAND, olive gray (5Y 4/2), 90% fine to medium sand, 5% silt, 5% fine gravel, slightly moist, dense, Strong HC odor SP SP-1/10' N.S. 67 SAND, same as above poor recovery-rock in sampler tip SP SP-1/15' 78 337 SAND, light olive gray (5Y 6/2 to 5Y 5/2), 90% medium sand, 10% fine sand, wet, very dense, Strong HC odor Drilled to 15 feet, sampled to 16.5'. Boring converted to 1 inch air sparging well. Screen is 0.02" slotted stainless steel. Casing is schedule 80 PVC. Screen interval filter packed with #3 monterery sand.

Number: **BOREHOLE/WELL LOG** SECOR SP-2 Client: Job No: ARCO Products Co. 1 of 1 80600-018-07 Location: Drilling Company/Driller: Facility No. 1919 SECOR Rep: West Hazmat Drilling Corp./Jeremy Patrick McConnell 660 Via De La Valle Carlson Solana Beach, Ca. Date Started: Date Finished: Drill Rig/Sampling Method: Borehole Dia.: Casing Dia.: Surface Elevation: 3/29/95 3/29/95 Agker Limited Access / HSA / Split Spoon 8" 1" SAMPLE LOG BOREHOLE LOG WELL LOG Lab Results Density Sample OVA/PID USCS Depth Geologic Descripton (Soil Type, color, grain, minor soil component, moisture, density, odor, etc.) Graphic Well (ppm) (ppm) Blows/ft in Feet Symbol Log Design 0-8" Concrete SP SAND, olive brown (5Y 5/3), 90% fine to medium sand, 5% Silt, 5% fine gravel, slightly moist, loose, Moderate HC odor SP-2/51 240 28 SP SAND, olive brown (5Y 5/3), 95% fine to medium sand, 5% silt, slightly moist, medium dense, Strong HC odor SP SP-2/10' 650 31 SAND, dark olive gray (5Y 4/2), 90% fine to medium sand, 5% clay, 5% silt, wet, dense, strong HC odor SP SP-2/15' 570 36 SAND, light olive gray (5Y 5/2), 95% fine to medium sand, 5% silt, wet, dense, Strong HC odor Drilled to 15 feet, sampled to 16.5', Boring converted to 1 inch air sparging well. Screen is 0.02" slotted stainless steel. Casing is schedule 80 20 PVC. Screen interval filter packed with #3 monterery sand.

Number: BOREHOLE/WELL LOG **SECOR** SP-3 Client: Sheet: Job No: 80600-018-07 ARCO Products Co. 1 of 1 Location: Drilling Company/Driller: SECOR Rep: Facility No. 1919 West Hazmat Drilling Corp./Dan Patrick McConnell 660 Via De La Valle Solana Beach, Ca. Date Started: Date Finished: Drill Rig/Sampling Method: Borehole Dia.: Casing Dia.: Surface Elevation; 3/28/95 3/28/95 CME 75HT / Hollow Stem Auger / Split Spoon 8" 1" SAMPLE LOG BOREHOLE LOG WELL LOG Sample OVA/PID Lab Results Depth in Feet Density USCS Geologic Descripton (Soil Type, color, grain, minor soil component, moisture, density, odor, etc.) Graphic Well Number Blows/ft (ppm) (ppm) Symbol Design SP SAND, olive brown (2.5Y 4/4), 100% fine to medium sand, moist, loose, Faint HC odor SP-3/5' 24 SP SAND, olive brown (5Y 5/4), 100% fines to medium sand, slightly moist, medium dense, very faint HC odor SP-3/10' 630 SP 50 SAND, olive gray (5Y 4/2), 90% fine to medium sand, 10% silt, moist to wet, dense, Strong HC odor SP SP-3/15' 895 70 SAND, light olive gray (5Y 6/2), 80% medium sand, 20% fine sand, wet, very dense, Strong HC odor Drilled to 15 feet, sampled to 16.5'. Boring converted to 1 inch air sparging well. Screen is 0.02" slotted stainless steel. Casing is schedule 80 PVC. Screen interval filter packed with #3 monterery sand. 25

5	SEC	COI	3				HOLE/WELI	LOC	Num	ber: SP-4		
İ					Client:	ARCO	Products Co.	Job No: 80600-018-	·07 Shee	t: 1 of 1		
SECOR Rep:					Location	Facilit	ny/Driller:					
		ck McCon				660 Via Solana	a De La Valle Beach, Ca.	West Hazm	at Drilling C	rilling Corp./Dan Nichols		
Date Started: 3/28/95		ate Finished	·		ampling Mo	ethod: / Hollow Ste	Casing Dia.:	ng Dia.: Surface Elevation				
	MPLE LOG						BOREHOLE LOG			WELL LOC		
Sample Number	OVA/PID (ppm)	Lab Results (ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	e, density, odor,	337-31				
SP-4/5'	200		26	2 3 4	SW		SAND, dark grayish bro to coarse sand, 5% silt, 5 moist, loose, moderate H	5% fine grav	2), 90% finel, slightly	e (*.*.*.		
				6 7 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SM		Silty SAND, dark reddis fine to coarse sand, 20% medium dense, Moderate	silt, slightly	R 4/3), 80° y moist,	%		
SP-4/10'	335		7	10 1 2 3	ML	-	Sandy SILT, light yelloge 60% silt, 40% fine sand odor	wish brown, wet, loose,	(2.5Y 6/4), Strong HC			
SP-4/15'	300		83	4 15 7 8 9 20 1 2 3 4 25 6 7 8	SP		SAND, gray (5Y 5/1), 80 sand, 10% silt, wet, very Drilled to 15 feet, sample converted to 1 inch air sp 0.02" slotted stainless ste PVC. Screen interval filte monterery sand.	dense, Stron ed to 16.5'. E parging well. eel. Casing is	Boring Screen is	-		

5	SE(COI	?		BO	ORE	HOLE/WELL LOG	Number: SP-5		
~					Client:	ARC	O Products Co. Job No: 80600-018-07	Sheet: 1 of 1		
SECOR Rep:		ck McCon	nell		Location	Fac 660 \	lity No. 1919 ia De La Valle ua Beach, Ca. Drilling Company/Drilling Comp	rilling Corp./Jeremy Carlson		
Date Started: 3/29/95	D	ate Finished: 3/29/9			ampling M ker Limi	ethod:	Borehole Dia.: Casing / HSA / Split Spoon 8" 1"	ing Dia.: Surface Elevation		
SA	MPLE LOG		[BOREHOLE LOG		WELL LOG	
Sample Number	OVA/PID (ppm)	Lab Results (ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	Geologic Descripton (Soil Type, color, grain, minor soil component, moisture, density	odor etc.)	Well	
				0		- 1	0-8" Concrete	, 544, 644,	Design	
				3 4	SP		SAND, yellowish brown (10YR 6/4), 90% medium sand, 5% Silt, 5% fine gravel, slig moist, loose, Faint HC odor			
SP-5/5'	105		25	5 6 7 8	SP		SAND, olive brown (5Y 5/4), 90% fine to sand, 10% fine gravel, slightly moist, med dense, Moderate HC odor	medium ium		
SP-5/10'	75		42	10 2 3	SP		SAND, light yelllowish brown (10YR 5/3 light olive (5Y 5/2), 100% fine to medium moist, wet at 10.5', dense, Moderate HC oc	sand,		
SP-5/15'	660		36	15 6	SP		SAND, light olive gray (5Y 5/2), 100% find medium sand, wet, dense, Strong HC odor	ne to		
				8 9 20 1 2 3 4 25 6			Drilled to 15 feet, sampled to 16.5'. Boring converted to 1 inch air sparging well. Scree 0.02" slotted stainless steel. Casing is sche PVC. Screen interval filter packed with #3 monterery sand.	en is		
				8 9 30		 			- · - ·	

Number: **BOREHOLE/WELL LOG SECOR** SP-6 Client: Job No: 80600-018-07 Sheet: ARCO Products Co. 1 of 1 Location: Drilling Company/Driller: Facility No. 1919 SECOR Rep: West Hazmat Drilling Corp./Dan Patrick McConnell 660 Via De La Valle Solana Beach, Ca. Date Started: Date Finished: Drill Rig/Sampling Method: Borehole Dia.: Casing Dia.: Surface Elevation: 3/28/95 3/28/95 CME 75HT / Hollow Stem Auger / Split Spoon 8" 1" SAMPLE LOG BOREHOLE LOG WELL LOG Sample Number OVA/PID Lab Results Density Depth USCS Graphic Geologic Descripton Well in Feet (ppm) Symbol (Soil Type, color, grain, minor soil component, moisture, density, odor, etc.) Log Design 6" Asphalt and Roadbase SP SAND, olive brown (2.5Y 4/4), 90% fine to medium sand, 5% silt, 5% fine gravel, slightly moist, loose, No HC odor SP-6/5' 120 30 SP SAND, light yellowish brown (2.5Y 6/4), 95% fine sand, 5% medium grained sand, slightly moist, medium dense SP SP-6/10' 330 21 SAND, gray to dark gray (5Y 6/1 to 5Y 4/1), stained black locally, 95% fine to medium sand, 5% silt, wet, medium dense, Strong HC odor SP SP-6/15' 250 51 SAND, brownish yellow (10YR 6/6), 90% fine to medium sand, 10% silt, slightly moist, very dense, moderate to strong HC odor Drilled to 15 feet, sampled to 16.5'. Boring converted to 1 inch air sparging well. Screen is 0.02" slotted stainless steel. Casing is schedule 80 PVC. Screen interval filter packed with #3 monterery sand.

Number: BOREHOLE/WELL LOG **SECOR** SP-7 Client: Sheet: Job No: 80600-018-07 ARCO Products Co. 1 of 1 Location: Drilling Company/Driller: SECOR Rep: Facility No. 1919 West Hazmat Drilling Corp./Dan Patrick McConnell 660 Via De La Valle **Nichols** Solana Beach, Ca. Date Started: Date Finished: Drill Rig/Sampling Method: Casing Dia.: Surface Elevation: Borehole Dia.: 3/28/95 3/28/95 CME 75HT / Hollow Stem Auger / Split Spoon 8" 1" SAMPLE LOG BOREHOLE LOG WELL LOG Sample Number OVA/PID Lab Result Depth in Feet Density USCS Graphic Geologic Descripton Well (ppm) (ppm) Blows/ft Symbol (Soil Type, color, grain, minor soil component, moisture, density, odor, etc.) Log 6" Asphalt and Roadbase SAND, yellowish brown (2.5Y 6/4), 100% fine to SP medium sand, slightly moist, loose, No HC odor SP-7/5' 9 50-5" Cobbles 5-6' SP SAND, dark yellowish brown (10YR 4/6), 100% fine sand, slightly moist, dense, No HC odor 37 SP 6.5-8' SAND, gray (10YR 5/1) with local iron 40 staining, 95% fine to medium sand, slightly moist, SP-7/10' 280 Faint HC odor 25 10 SP 8.5-10' SAND, olive gray (5Y 5/2) to gray (10YR 5/1), 95% fine to medium sand, 5% silt, moist at 14 8.5', wet at 9.5', dense, Moderate HC odor 25 SP 10-11.5' SAND, black (2.5Y N2/0) to dark gray (N 4/0), 95% fine to medium sand, 5% silt, wet, medium dense, Strong HC odor. Heavily stained 41 SP 15 with HC SP-7/15' 250 63 SP 11.5-13.5' SAND, gray (5Y 5/1) to black (2.5Y N2/0), 100% fine to medium sand, wet, medium dense, Strong HC odor and staining 13.5-15' SAND, very pale brown (10YR 7/3) with fresh black (2.5Y N2/0, stained with HC), 100% fine to medium sand, trace silt, wet, dense, Strong HC odor 15-16.5' SAND, dark gray (5Y 4/1) to olive gray (5Y 4/1), 100% fine to medium sand, wet, very dense, strong HC odor Refusal at 16.5' Drilled to 15 feet, sampled to 16.5'. Continuous core sampling from 5-16.5 feet. Boring converted to 1 inch air sparging well. Screen is 0.02" slotted stainless steel. Casing is schedule 80 PVC. Screen interval filter packed with #3 monterery sand.

	JECT I ATIÓN	: A	RC 60	O ST	CATION 1919 DE LA VALLE,	DATE DRILLED: APRIL LOGGED BY: G. BU APPROVED BY: R. KO	ICKN	NER		
			OL	ANA	BEACH, CALIFORNIA	DRILLING CO.: WEST HAZMAT DRILLING				
BLOWS PER 6 INCHES	CGI (ppm)	TPH (ppm)	SAMPLE	! -	DRILLING METHOD: 10-INCH-DIAMETER SEAMPLER TYPE: 2-INCH-DIAMETER SET TOTAL BORING DEPTH: APPROX. 12 FELEVATION: 16 FEET ABOVE MEAN SEDEPTH TO GROUND WATER: APPROX. 1	PLIT-SPOON FEET BELOW GRADE EA LEVEL 10.5 FBG ON 4-13-94	USCS	ПТНОСОСУ	WE CONSTR DET	RUCTION
16,23,25 12,20,25 15,23,20 18,22,22 15,22,20	AIT	ND 7,503 5,732		-0 -1 -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12- -13 -14 -15 -16 -17 -17 -17	Hand excavated to approximately 5 feet below grant Asphaltic concrete 3 inches thick. Fill. Dense, moist, very pale orange (10YR 8/2), fine-grant TORREY SANDSTONE. Dense, moist, very pale orange (10YR 8/2), fine-grant As above. As above. As above. As above. As above. Sample VEW-26 - 7. As above. Sample VEW-26 - 10. B = 83.7 ppm, T = 475.7 p	rained SAND, trace silt.	SP		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	locking cap Concrete (1 beg) 2-inch- diameter Schedule 40 PVC casings Bentonite Grout (0.5 bag) Bentonite Chips (1 bag) 2-inch- diameter Schedule 40 PVC casing with 0.020- inch slotting No. 3 Monterey Sand (4 begs) End cap
	ALTON GEOSCIENCE San Diego, California LOG OF EXPLORAT				LOG OF EXPLORATO	DRY BORING			VEW-2 PAGE 1 OF	

PROJECT NO.: 600064-52					2	DATE DRILLED: APRIL 13 1994					
LOCATION: ARCO STATION 1919						LOGGED BY: G. BUCKNER					
660 VIA DE LA VALLE,						APPROVED BY: R. KOFRON, CEG					
SOLANA BEACH, CALIFORNIA					BEACH, CALIFORNIA	DRILLING CO.: WEST HAZMAT DRILLING					
	CGI (ppm)		ole .		DRILLING METHOD: 10-INCH-DIAMETER	HOLLOW STEM AUGER					
Ì) DEPTH (fbg)	SAMPLER TYPE: 2-INCH-DIAMETER SI	PLIT-SPOON			14/	7E1 I	
6		ТРН (ррм)			TOTAL BORING DEPTH: APPROX. 9.5	FEET BELOW GRADE		} }	WELL CONSTRUCTION		
VS P					ELEVATION: 16 FEET ABOVE MEAN SE	A LEVEL	USCS LITHOLOGY		DETAIL		
BLOWS PER 6 INCHES			SAMPLE		DEPTH TO GROUND WATER: APPROX.	8 FBG ON 4-13-94	uscs	Ħ			
			+"		DESCRIPTION		1313		Standard cover with		
				Ľ,	Hand excavated to approximately 5 feet below gra Asphaltic concrete 3 inches thick.	de.			٥٦٦	locking cap Concrete	
				-1	Tank cavity backfill.	·			1 - 😺 🜷	(1 bag) 2-inch-	
				<u>ا</u> ۾ ا	• •				▎▗┤░╎ऽ	diameter Schedule 40 PVC casing	
				- 2 -	Medium dense, moist, light brown (5YR 5/6), fine-g	grained SAND, with silt.	SP		°∃∜∣∵	Bentonite	
				– 3					3 2 2	Grout (0.5 bag)	
			İ	-		•				Bentonite Chips (1 bag)	
			İ	_4	•				4-111	(1Deg)	
5,10,15	15	ND	Ļ	- 5	As above.				5 4		
5,10,15	15			-	Sample VEW-27 - 5.					2-inch- diameter	
			$\ \ $	-6					6 —	Schedule 44 PVC casing with 0.020-	
				7	,		l			inch slotting	
8,12,13	300	283	-	├ _	Medium dense, moist, light olive gray (5Y 5/2), fine	e-grained SAND, with silt.			6— 7— 8—	No. 3	
				<u> -</u> 8¥	Sample VEW-27 - 7.5.				8 —	Monterey Sand (3 bags)	
				_ ,	,					(0 0000)	
	į						_			End cap	
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ALTON				1					VEW-	.27	
GEOSCIENCE San Diego, California				CE rnia	LOG OF EXPLORATORY BORING			VEW-27			
							PAGE 1 OF 1				

PRO	PROJECT NO.: 600064-52					DATE DRILLED: APRIL 13 1994					
LOC	LOCATION: ARCO STATION 1919					LOGGED BY: G. BUCKNER					
660 VIA DE LA VALLE,					PE LA VALLE,	APPROVED BY: R. KOFRON, CEG					
	SOLANA BEACH, CALIFORNIA					DRILLING CO.: WEST HAZMAT DRILLING					
			T	1	DRILLING METHOD: 10-INCH-DIAMETER	HOLLOW STEM AUGER					
	CGI (ppm)	TPH (ppm)	SAMPLE	 	SAMPLER TYPE: 2-INCH-DIAMETER SE	PLIT-SPOON			l	,	
H					TOTAL BORING DEPTH: APPROX. 11.5	FEET BELOW GRADE			WELL CONSTRUCTION		
VS P					ELEVATION: 16 FEET ABOVE MEAN SE	A LEVEL		ဒ္ဒြ		ETAIL	
BLOWS PER 6 INCHES					DEPTH TO GROUND WATER: APPROX.	10.5 FBG ON 4-13-94	uscs итнособу				
ш. Ф	3				DESCRIPTION		-	-	Standa	ard cover with	
				F°	Hand excavated to approximately 5 feet below gra- Asphaltic concrete 3 inches thick.	de.			٦٦	locking cap Concrete	
				- 1	Fill.				1 —	(1 bag)	
				H						diameter Schedule 4	
				2	TORREY SANDSTONE.				2-	PVC casing Bentonite	
	'			_ 3	Description of the second of t				₃⊒ٽٳڮٚ		
	1		ĺ	}	Dense, moist, very pale orange (10YR 8/2), fine-gr	ained SAND, trace sitt.	SP		_63 63	Bentonite Chips	
	<u> </u>			-4					4-88	(1 bag)	
				_5	·				[-] [
				J					5	2-inch- diameter	
			ĺ	- 6					6 —	Schedule 4 PVC casin	
				上,			'			with 0.020- inch siettin	
12,27,29			П	T'							
		ND		– 8	As above. Sample VEW-28 - 8.				8 —	No. 3 Monterey	
15,21,28			H	├						Sand (4 bags)	
		233	$\ $	9	As above.	·			9一貫	F-4	
		233	Ц	10	Sample VEW-28 - 9.5. As above.		ĺ		10	End cap	
9,12,13		1,381			Sample VEW-28 - 10.5.						
		66,463		-11	Sample VEW-28 - 11. B = 304 ppm, T = 1,658 pp X = 3,850 ppm.	om, E = 642 ppm,			11-		
				12			T		12-	1	
			ĺ	 -					"-		
				- 13			ļ		13—		
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				-]	***************************************	
			_	<u> </u>							
	ALT				LOG OF EVEL OBAT				VEW-	-28	
GEOSCIENCE San Diego, California			Ni	CE rnia	LOG OF EXPLORATORY BORING			PAGE 1 OF 1			

VAPOR EXTRACTION WELL CONSTRUCTION DETAIL TRAFFIC WORTHY LOCKING CAP **UTILITY BOX** — GRADE SURFACE 0802 0802

· CONCRETE 0 ft. to 0.5 ft.

O084

4-INCH PVC SCREEN CASING 0.020 inch Slots

PEAGRAVEL (TANK

CAVITY BACKFILL) 0.5 ft. to 15 ft.

PROJECT NUMBER: 600064-22

SITE:

ARCO STATION 1919

ADDRESS:

660 Via de la Valle

Solana Beach, California

WELL NUMBER:

VEW-29

INSTALLATION DATE:

11-10-93

TOTAL BORING DEPTH: _____ 15 ____ ft.

CASING DIAMETER:

4____ in.

CASING/SCREEN DEPTH: _____ 15 ____ ft.

LEGEND

000

CONCRETE

FILTER PACK (PEAGRAVEL)

NOTE: DRAWING IS NOT TO SCALE

ALTON GEOSCIENCE San Diego, California

SCREEN CASING **INTERVAL** 0.5 ft. to 15 ft.

APPENDIX B
ALTON GEOSCIENCE FIGURES
CORRECTIVE ACTION PLAN
ATLANTIC RICHFIELD COMPANY
ARCO Facility #1919
660 Via de la Valle
Solana Beach, California
SAM Case #H05166-002
SECOR PROJECT NO. 08BP.01919.07
October 21, 2005

